US Army Corps of Engineers

AD-A256 276







GEOTECHNICAL LABORATORY

MISCELLANEOUS PAPER S-73-1

(2)

STATE-OF-THE-ART FOR ASSESSING EARTHQUAKE HAZARDS IN THE UNITED STATES

Report 28

RECOMMENDED ACCELEROGRAMS FOR EARTHQUAKE GROUND MOTIONS

by

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June 1992

Report 28 of a Series

Approved For Public Release; Distribution Unlimited

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92 10 7 039

92-26682

Prepared for DEPARTMENT OF THE ARMY
US Army Corps of Engineers
Washington, DC 20314-1000

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	June 1992	Report 28 of a Series

4. TITLE AND SUBTITLE
State-of-the-Art for Assessing Earthquake Hazards in the United States; Report 28, Recommended Accelerograms for Earthquake Ground Motions

5. FUNDING NUMBERS

6. AUTHOR(S)
David J. Leeds

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
David J. Leeds and Associates
11972 Chalon Road
Los Angeles, California 90049

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
USAE Waterways Experiment Station
Geotechnical Laboratory
3909 Halls Ferry Road
Vicksburg, MS 39180-6199

10. SPONSORING/MONITORING AGENCY REPORT NUMBER
Miscellaneous Paper
S-73-1

11. SUPPLEMENTARY NOTES
Available from National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

12a. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

A catalogue of recommended accelerograms and response spectra is provided to accompany all representative values for Richter magnitudes at distance-determined peak horizontal accelerations-velocities-durations, hard and soft sites, shallow and deep earthquakes. Accelerograms are also recommended for corresponding Modified Mercalli intensities. The accelerograms are related to the Krinitzsky-Chang-Nuttli curves for magnitude and distance, and the Krinitzsky-Chang curves for MM intensity.

14. SUBJECT TERMS
Accelerograms
Catalogue
Earthquakes
Ground motions

15. NUMBER OF PAGES
433

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED		

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PREFACE

This report is part of ongoing studies in Civil Works, Research and Development Investigation: "Earthquake Hazard Evaluations for Engineering Sites," sponsored by the Department of the Army. This study was conducted by David J. Leeds, consultant. The figures and appendices were prepared at the Waterways Experiment Station with Mr. Leeds' direction.

The preparation of this report was under the supervision of Dr. E. L. Krinitzsky, Geotechnical Laboratory (GL), Waterways Experiment Station (WES), and the general supervision of Dr. W. F. Marcuson III, Chief, GL.

At the time of publication of this report, Director of WES was Dr. Robert W. Whalin. Commander and Deputy Director was COL Leonard G. Hassell, EN.

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STATE-OF-THE-ART FOR ASSESSING EARTHQUAKE HAZARDS IN THE UNITED STATES

RECOMMENDED ACCELEROGRAMS FOR EARTHQUAKE GROUND MOTIONS

PART I: INTRODUCTION

Background

1. This report presents accelerograms and response spectra in support of the Krinitzsky-Chang (KC) intensity-related and the Krinitzsky-Chang-Nuttli (KCN) parameters for specifying magnitude-related earthquake ground motions.

2. The KC parameters for intensity-related earthquake ground motions are published in this present series:

> Report 25: "PARAMETERS FOR SPECIFYING INTENSITY-RELATED EARTHQUAKE GROUND MOTIONS," by E. L. Krinitzsky and Frank K. Chang, September 1987; and as "Intensity-Related Earthquake Ground Motions," *Bulletin of the Association of Engineering Geologists*, Volume XXV, Number 4, 1988, pages 425-435.

3. The KCN parameters for magnitude-related earthquake ground motions are published in this present series:

> Report 26: "PARAMETERS FOR SPECIFYING MAGNITUDE-RELATED EARTHQUAKE GROUND MOTIONS," by E. L. Krinitzsky, Frank K. Chang, and Otto W. Nuttli, September 1987; and as "Magnitude-Related Earthquake Ground Motions," *Bulletin of the Association of Engineering Geologists*, Volume XXV, Number 4, 1988, pp 399-423.

4. As stated in these two previous reports, the motions shown are useful "where dynamic analyses are contemplated and time histories [and response spectra] are required that approximate the effects of earthquakes as they would be felt in the free field at an engineering site."

PART II: THE DATA

General

5. The accelerograms and response spectra presented are derived from the worldwide inventory of published (and unpublished) strong motion records. Unfortunately, there is no single source databank of records available, and even the principal agencies involved in data collection are months and sometimes years in arrears in their data processing. An additional constraint impacting our selection of pertinent records was the variation in format of both original and processed data, particularly with regard to response spectra. Thus, many otherwise potentially valuable records had to be eliminated because of their inherent uncertainty, unreliability, or non-uniformity.

6. In our utilization of the available inventory, we have emphasized records with amplitudes of approximately 200 gals and greater, unless the record is from a region of sparse instrumentation or it is of exceptional interest. In doing so we have taken advantage of the tendency by the various collecting agencies to process larger records more promptly than smaller ones. Another point in support of this emphasis on larger records is that in scaling it seems more appropriate to scale down rather than up.

7. The primary sources of data for this report are the following:

   a. The worldwide compilation by Crouse et al. (1980, 1981) covering the period 1933-1978. [See "References" for complete documentation.]

   b. The Krinitzsky and Chang (1987) listing in Report 25 of this present series, with some events listed through April 1984.

   c. The CalTech "Blue Books" (1975), which present the entire suite of significant strong motion records from inception of the Coast and Geodetic Survey's Strong Motion Program in 1932 through the 1971 San Fernando Earthquake. Printouts show digitized uncorrected and corrected accelerograph traces and their response spectra--all at a standardized base.

   d. Guerrero Earthquake and other Mexican data recently (1989) published by John Anderson of the University of Nevada, Reno.

   e. Loma Prieta, California data from the 18 October 1989 (GMT) earthquake processed by the US Geological Survey and by the California Division of Mines and Geology Office of Strong Motion Studies.

   f. Continuing publications of the US Geological Survey and the State of California's Office of Strong Motion Studies, Division of Mines and Geology.

8. Since completion of the Blue Books, the profession has operated with a crisis-triggered response for publication of strong motion earthquake data. Events have conspired to bring about this condition--including the proliferation of accelerograph stations, their excellent seismic/geographic placement with respect to strong but infrequent earthquakes, and budgetary limitations. The result is that the "best," i.e., biggest, records are ultimately processed and distributed to the profession while many other useful records are bypassed and field information is neglected.

9. As may be expected, secondary sources of data, in the sense that they lack the quantity of data available at a single source, appropriately processed, are widely distributed both geographically and by sponsor. Consequently, there is no standardized format or uniformity.

10. For each accelerogram with its response spectra, the following data are provided in this report when available, with some explanation in paragraphs following:

a. Identification number (for data handling in this report only).

b. Date and time of earthquake--year, month, and day in 6-digit number; time as GMT.

c. Earthquake name or general location.

d. Location or name of accelerograph station.

e. Site characteristics--whether hard or soft.

f. Magnitude.

g. Focal depth in kilometers.

h. Epicentral distance in kilometers.

i. Orientation of horizontal component in degrees.

j. Hypocentral (focal) distance in kilometers.

k. Maximum horizontal acceleration for each horizontal trace in centimeters per second per second.

l. Maximum horizontal velocity for each horizontal trace in centimeters per second.

m. Maximum horizontal displacement in centimeters.

n. Bracketed duration in seconds at 5 percent and 10 percent g.

o. Epicentral intensity and site intensity, MMI.

p. Station number, with owner identification.

q. Latitude and longitude of epicenter and of station.

r. Copy availability.

s. References.

Earthquake Magnitude

11. The magnitude, as in the previous studies (Reports 25 and 26), is designated as Richter magnitude. The values used have been taken as much as possible from Report 25 and are "equivalent to moment magnitudes for M up to 8.3, to local magnitudes for M below 5.9, and to surface-wave magnitudes for M at 5.9 to about 8.0.

12. A few magnitudes have been changed from values used in Report 25 to conform with more recent investigations or to adjust within the framework of related events. As is well known, there can be as many published magnitudes as there are reporting stations. Therefore, an effort has been made to use the most reliable value consistent with the locale and reporting networks within the framework of the definition above.

13. Differences in reported magnitudes, as well as overlap and lack of equivalency in the several magnitude scales, if resulting in reinterpretations, may justify some changes in the application of the data.

Focal Depth

14. The focal depth of earthquakes that generated the accelerograms used in this report vary from shallow events that created surface fault ruptures to very deep subduction zone events. However, there is a natural division of data that is followed in the guidelines of Reports 25 and 26. Shallow events usually have their focus at 19 km or less, and deep focus earthquakes usually have their focus at 20 km or more. A few shallow Italian events have been adjusted arbitrarily from a reported 21 or 22 km depth to a more appropriate 19 km. Certain computer-generated "trial" depths of 33 km in normally shallow focus areas have also been corrected to a more appropriate 19 km.

Site Classification

15. Sites are classified in accordance with Reports 25 and 26, wherein rock and stiff soils are considered "hard" sites. "Rock" sites are indicated with an asterisk (*) where their properties have been confirmed unquestionably. Sites with more than 16 m of cohesionless soil or soft-to-medium stiff clay are considered "soft" sites.

16. In certain cases where on-site inspection was not feasible and published descriptions could not be found, reliance was placed on geologic and topographic maps for assignment of site classification.

Distance from Source

17. Epicentral distance is given for all events. In addition, hypocentral distance (station to focus) is given for all shallow events. This is consistent with the tabulations in Reports 25 and 26 and is generally appropriate, especially for deep subduction zone earthquakes and for distant deep, imprecisely located sources. The principal problem is shallow fault earthquakes with surface rupture where accelerograph station sites are located close to the breaking fault. A case in point is the 1979 Imperial Valley Array, which crosses the fault but is distant from the epicenter and "focus". This has not been resolved except to presume that errors will be lost in the statistical smoothing.

Peak Motions

18. Peak motions are as measured and published on the digitized corrected accelerogram and on the plotted printout of velocity and displacement. Peak displacements are tabulated in the master list of accelerograms but are not actually used in this report.

19. It may be noted that until the 1+ g accelerogram recorded at Pacoima Dam in the 1971 San Fernando Earthquake, accelerations greater than about 40 percent g were unheard of, or at best attributed to site or instrumental aberrations. An attachment to this report lists more than 100 accelerograph traces worldwide that exceed 400 gals and a small number of traces that exceed 1000 gals Clearly, these high accelerations are not the norm, but they do occur and are well documented. Research is still needed into the precise geologic/seismic/soils conditions at the locations of these mostly anomalous records. Instrumental and processing vagaries might also contribute to some of these large amplitudes.

Effects of Structures

20. Data are primarily from free-field locations wherever possible. In addition, ground or basement sites of small buildings are usually acceptable. A few cases of recordings in basements of massive structures are used; and while a structure has some modest influence on the record, it is not considered statistically significant. In no case are recordings used from upper floors of structures or from crests of dams. Toes and abutments of dams are generally satisfactory locations and are used whenever available.

Effects of Recording Instruments

21. Values have been used as published without regard to instrumental characteristics inherent in the record. The bulk of the data is from instrumentation that conforms to contemporary US standards in which instrumental corrections have been taken into account in the processing. The master lists of accelerograms (see Appendix A) indicate the type of instrument on which the accelerogram was written, if known. Although there is a wide variety of instrumentation in use, the bulk of processed data currently available is from triaxial photographic recording instruments. Late model instruments have radio time as an added channel--useful for identification and for seismologic studies.

22. Japanese records are an exception since most are written on waxed paper. However, instrumental characteristics in the range of periods of interest are sufficiently similar.

23. Currently, few records are digital--a prelude to the next generation of strong motion data. While processing is convenient and the data readily manipulated, little of the data has been processed into the conventional response spectra format generally in use by the engineering profession. The recent Mexican Guerrero data is a welcome exception to this generalization.

Calculations

24. Few calculations were required for this study except for source (or hypocenter) distances and scale factors. If not published, distances were either scaled from maps or computed geodetically.

Copy Availability

25. The master list printouts (Appendix A) employ several abbreviations to indicate the availability of hard copy of accelerogram time-histories and their resulting response spectra used in this report, as follows:

yes - Hard copy of time-history and response spectra

TH - Time-history only, usually uncorrected

VS - Time-history and velocity spectra only

no - No satisfactory copy available

26. Accelerograms are not available from the Waterways Experiment Station or from the author. The following organizations can usually supply listings, paper copies, floppy disks or magnetic tapes of accelerogram time histories and their resulting spectra. The National Geophysical Data Center (NGDC) is considered the national archive for United States and worldwide data. Lamont-Doherty Geological Observatory (LDGO) is currently developing software to make the inventory more readily computer-accessible. The California Division of Mines and Geology (CDMG) is a more direct source for their data.

National Geophysical Data Center, NOAA Code E/GC1
325 Broadway, Boulder, Colorado 80303 (303) 497-6764
Over 13,000 worldwide digitized and processed records on tape or diskette.

Lamont-Doherty Geological Observatory
Attention: Paul Friberg, Seismology Dept., Route 9W,
Palisades, New York 10964 (914) 359-2900
On-line parametric and time-series data over a computer network.

California Division of Mines & Geology
Strong Motion Instrumentation Program
Anthony F. Shakal, Program Manager
630 Bercut Drive, Sacramento, California 95814
(916) 322-3105

Processed data for CDMG strong motion stations on paper, tape, or diskettes.

References

27. The abbreviated references given in the master printouts refer to the source of hard copy time-history and response spectra available to, and utilized in, this report. More complete documentation of publications used appears in a later section of the report entitled "References".

PART III: ARRANGEMENT OF REPORT

28. The two basic documents that this report supports by providing time-histories and response spectra have essentially given criteria for seismic design based (a) on source characteristics of the earthquake, (b) on accelerograph site characteristics, and (c) when intensity is the principal criterion, on hypocentral distance, i.e, whether near field or far field. The parallel second criterion is consideration of magnitude.

29. Earthquake sources are either shallow (plate boundary with focal depth of 19 km or less) or deep (subduction zone with focal depths of 20 km or more). Most earthquakes can be readily categorized into these two classes. In a few cases we have reinterpreted published data into one class or the other. This is so only where there have been preliminary computer trial solutions using a depth of 33 km, which we have reduced to 19 km if the seismogenic environment permitted. Published depths of 20 or 21 km we have routinely reclassified as shallow or 19 km.

30. Accelerograph locations are classified as either hard or soft sites. However, many accelerograph locations do not readily fit into these two categories, and there is not universal agreement on their definition. We have followed the criteria of Reports 25 and 26, and have further indicated the few hard sites as rock where their characteristics are well known and there is unlikely to be a question. Hard sites would normally include stiff soil as well as a thin overlay of soft material. Our rock sites require that the accelerograph be mounted on exposed crystalline rock with only a bare minimum (2 m) of soil or weathered material above the crystalline rock.

31. The concept of near field and far field was developed by Krinitzsky and Chang in 1987 (Report 25) in order to improve the predictability of intensity-based ground motion. This concept provides a key for the specification of criteria and is a major division of accelerogram groupings where intensity is the primary factor. Analogous accelerograms have been selected from the inventory that relate directly to the criteria developed and presented graphically herein on the curves of Report 25.

32. The limits of near-field data utilized in the present report are as follows:

Magnitude M	MM Max Int. Io, Epicenter	Max Source Distance, km
5.0 (to 5.4)	VI	5
5.5 (5.0 to 5.9)	VII	15
6.0 (5.5 to 6.4)	VIII	25
6.5 (6.0 to 6.9)	IX	35
7.0 (6.5 to 7.4)	X	40
7.5 (7.0 and up)	XI	45

33. The limits of far-field data utilized in the present report are as follows:

Magnitude M	MM Max Int. Io, Epicenter	Min Source Distance, km
5.5 (5.0 to 5.9)	VI	20
6.0 (5.5 to 6.4)	VII	25
6.5 (6.0 to 6.9)	VIII	35
7.0 (6.5 and up)	IX	40

34. Accordingly, the accelerogram suites are presented in several major groupings with Table and Figure numbers as described on the following pages.

TABLE AND FIGURE NUMBERS FOR ACCELEROGRAMS FOR GROUND MOTION

(a) SHALLOW EVENTS -- INTENSITY RELATED

Horizontal Peak Motions	Near Field		Far Field	
	Hard Site Part V	Soft Site Part VI	Hard Site Part VII	Soft Site Part VIII
Acceleration, Tables	1a - 1e	4a - 4e	7a - 7e	10a - 10e
Figures	1	4	7	10
Velocity, Tables	2a - 2e	5a - 5e	8a - 8e	11a - 11e
Figures	2	5	8	11
Duration, Tables	3a - 3e	6a - 6e	9a - 9e	12a - 12e
Figures	3	6	9	12

(b) DEEP EVENTS -- INTENSITY RELATED

Horizontal Peak Motions	Far Field	
	Hard Site Part IX	Soft Site Part X
Acceleration, Tables and Figures	13	16
Velocity, Tables and Figures	14	17
Duration, Tables and Figures	15a - 15c	18a - 18c

(c) SHALLOW EVENTS -- MAGNITUDE RELATED

Horizontal Peak Motions	Hard Site Part XI	Soft Site Part XII
Acceleration, Tables and Figures	19a - 19e	22a - 22e
Velocity, Tables and Figures	20a - 20e	23a - 23e
Duration, Tables and Figures	21a - 21e	24a - 24e

Note that each magnitude-related segment has a separate table and plot for five magnitude ranges, with a suffix "a", "b", "c", "d", or "e", and is described in a following paragraph.

(d) DEEP EVENTS -- MAGNITUDE RELATED

Horizontal Peak Motions	Hard Site Part XIII	Soft Site Part XIV
Acceleration, Tables and Figures	25a - 25e	28a - 28e
Velocity, Tables and Figures	26a - 26e	29a - 29e
Duration, Tables and Figures	27a - 27e	30a - 30e

Selected accelerograms recommended have been plotted on the corresponding charts from Reports 25 and 26. In the original reports where the spread of the data between hard and soft sites did not exceed 1 sigma the data were lumped into "all sites." The present report uses the KC and KCN differentiation as a standard but distinguishes between hard and soft sites in assignment of actual accelerograms to their respective suites.

PART IV: SELECTION OF ACCELEROGRAMS

35. The master lists, i.e., inventory of accelerograms (Appendix A) were developed from the variety of sources outlined in Part II. The arrangement is alphabetical and chronological by state for the United States (Appendix A1) and by country for the balance of the world (Appendix A2). For convenience and ease of computer handling, the two listings have been kept separate.

36. After the master lists were completed, the data was sorted into a number of categories to determine which accelerograms could be considered as "generic". The first separation isolated shallow from deep sources in the US listing (Appendix A1). Since so few accelerograms have been obtained from deep United States earthquakes (only for Hawaii and Washington events), they were arbitrarily assigned to the World list to be included with worldwide deep events (Appendix A2). The US list was then ordered into hard or soft site categories, and each category was further ranked according to magnitude. In addition, in the hard site category rock sites were flagged.

37. In this manner, homogeneous suites of data were developed that satisfied all of the requirements for generic accelerograms. Each suite of data was applicable to be "plugged in" to the KC or KCN charts. Each was consistent in having available time histories and spectra; each was either shallow or deep; and each was either from a hard or a soft site. In addition, each suite was ordered by magnitude.

38. Final selection of candidate accelerograms with their response spectra for each of the categories (by magnitude) followed.

Selection Process

39. The suites of data isolated above were further split into magnitude ranges consistent with the KCN graphs of Report 26:

Magnitude 5.5	Range 5.0 to 5.9
Magnitude 6.0	Range 5.5 to 6.4
Magnitude 6.5	Range 6.0 to 6.9
Magnitude 7.0	Range 6.5 to 7.4
Magnitude 7.5	Range 7.0 to 7.9

Data from each of these subsites was then plotted on one of the Report 26 graphs for acceleration, velocity, duration, and intensity A separate graph

sheet was used for each parameter and for each magnitude range. All of the available accelerograms were initially spotted onto the graphs, but only those reasonably close to the mean line were utilized and are shown.

40. The selection process contains additional winnowing, in that an effort was made to limit the number of candidate accelerograms from a given earthquake and to restrict all selections to candidates that would require no or low scaling. The low scaling requirement eliminated many of the extreme amplitude records. These harsh but required limitations imposed a severe handicap on the number of accelerograms available but satisfied the requirements for similitude and coherence.

Generic Accelerograms

41. Suitable generic accelerogram records (traces) have been selected for each magnitude range. The selected records are identified on each of the sheets, and copies of the time histories and their spectra are included in Appendix B and tabulated in Appendix A.

PART V: TABLES AND FIGURES FOR INTENSITY-RELATED PEAK GROUND MOTION FOR NEAR-FIELD SHALLOW EVENTS ON HARD SITES

42. Generic accelerograms for near-field ground motion with Modified Mercalli intensity as the parameter follow. Rock sites are indicated by an asterisk after the I.D. number.

Column headings:

"Int" is Modified Mercalli Intensity at accelerograph station.
"Mag" is Richter Magnitude as defined in this report.
"Hypo km" is hypocentral distance.
"Acc gal" is maximum recorded acceleration from accelerogram.
"Mean gal" is mean acceleration from KC or KCN graphs.
"Scale x" is multiplier to convert record value to mean KC or KCN value.
"Plus Sigma" is mean plus 1 sigma value from KC or KCN graphs.
"Scale X" is multiplier to convert record value to mean plus 1 sigma KC or KCN value.
"I.D.No." is assigned identification of accelerograms (see Appendices).
"Vel" is maximum record velocity from accelerogram in cm/sec.
"Mean Vel" is mean velocity from KC or KCN graphs.
"Dur" is bracketed duration in seconds at 5% g.
"Mean Dur" is mean duration from KC or KCN graphs.
"Scale +,-" is added value to convert record value to KC or KCN value.
Second "Scale +,-" is added value to convert record value to mean plus 1 sigma KC or KCN value.

Table 1a

Shallow-Int-Near-Hard-Accel-Mag 5.5

Mag max 5.9; Int max VII; Hypo max 15 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VI	2.7	2	220	179	0.81	345	1.57	SC 2
VI	4.8	9	231	179	0.77	345	1.49	CAN 2
VI	5.1	14	193	179	0.93	345	1.79	CAL 214
VI	5.4	15	194	179	0.92	345	1.78	CAL 21
VII	5.9	10	245	280	1.14	550	2.24	CAL 99
VII	5.4	10	214	280	1.31	550	2.57	SAL 12
VII	4.8	10	340	280	0.82	550	1.62	CAN 1
VII	5.1	14	260	280	1.08	550	2.71	CAL 203
VII	5.0	15	257	280	1.09	550	2.14	ROC 8

Table 1b

Shallow-Int-Near-Hard-Accel-Mag 6.0

Mag max 6.4; Int max VIII; Hypo max 25 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VIII	4.8	8	564	450	0.80	815	1.45	CAN 3
VIII	4.8	8	417	450	1.08	815	1.95	CAN 5
VIII	4.8	12	451	450	1.00	815	1.81	CAN 8
VIII	6.3	24	360	450	1.25	815	2.27	ROC 1
VIII	6.2	26	640	450	0.70	815	1.27	CAL 229

Table 1c

Shallow-Int-Near-Hard-Accel-Mag 6.5

Mag max 6.9; Int max IX; Hypo max 35 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
IX	5.4	8	850	680	0.80	1300	1.52	MEX 71*
IX	5.4	8	1125	680	0.60	1300	1.16	MEX 72*
IX	6.9	10	1080	680	0.63	1300	1.20	CAN 9
IX	6.9	10	1319	0	0	1300	0.99	CAN 10
IX	6.5	17	1055	680	0.64	1300	1.23	CAL 23*
IX	6.5	17	1148	680	0.59	1300	1.13	CAL 22*

Table 1d, 1e

Shallow-Int-Near-Hard-Accel-Mag 7.0+

Large Mag; Int max X; Hypo max 40 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
X	5.4	8	850	1100	1.29	1500	1.76	MEX 71*
X	5.4	8	1125	1100	0.98	1500	1.33	MEX 72*
X	6.9	10	1080	1100	1.02	1500	1.39	CAN 9
X	6.9	10	1319	1100	0.83	1500	1.14	CAN 10
X	6.5	17	1055	1100	1.04	1500	1.42	CAL 23*
X	6.5	17	1148	1100	0.96	1500	1.31	CAL 22*

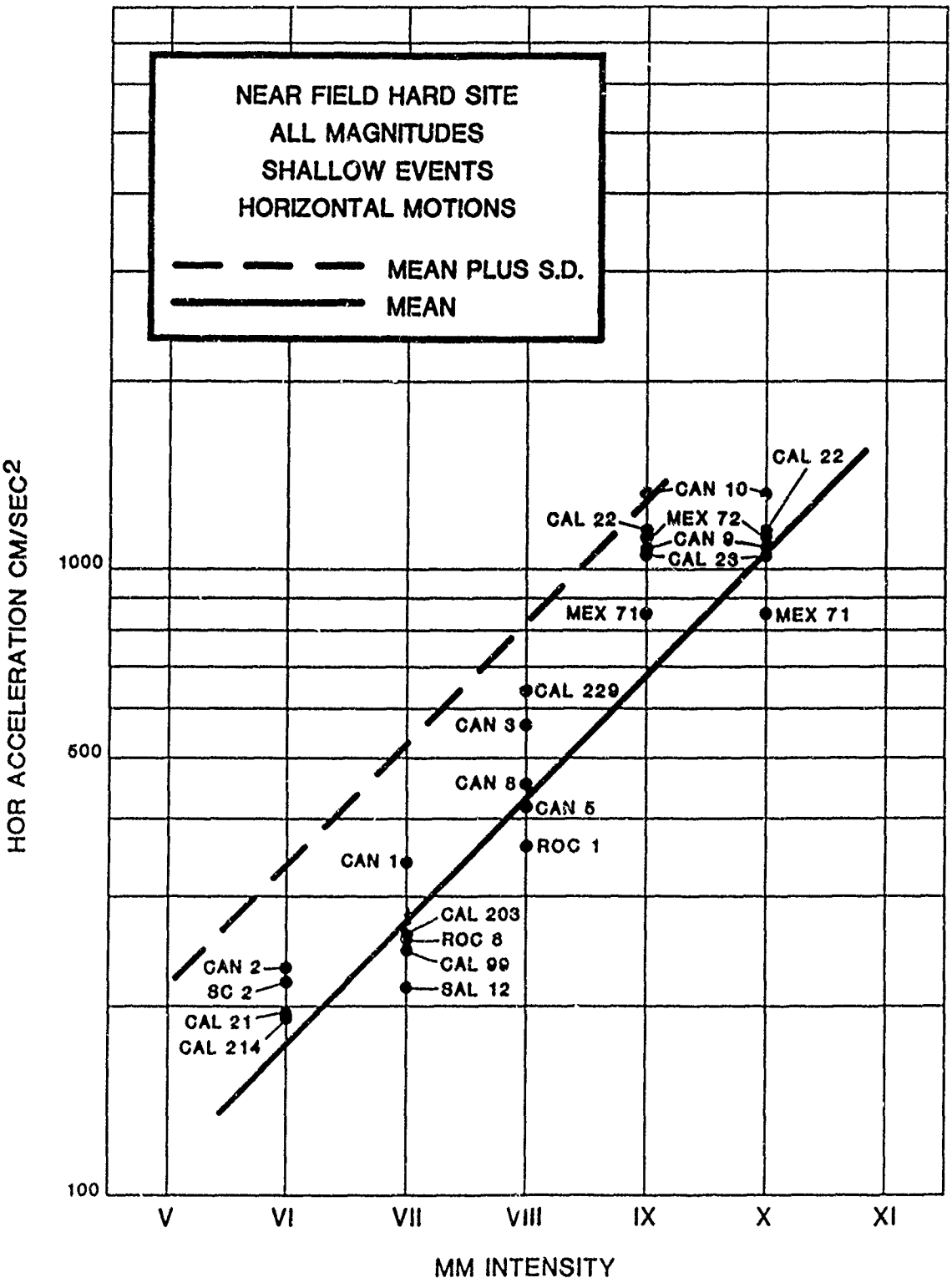


Figure 1. Accelerograms for acceleration and intensity for shallow earthquakes at near-field hard sites. (See Tables 1a-e.)

43. Generic accelerograms for near-field ground motion with intensity and velocity as the parameters follow. An asterisk after the I.D. number indicates a rock site.

Table 2a

Shallow-Int-Near-Hard-Vel-Mag 5.5

Mag max 5.9; Int max VII; Hypo max 15 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VI	5.4	15	9.6	7.1	0.73	11.0	1.15	CAL 21
VI	5.1	14	12.4	7.1	0.57	11.0	0.89	CAL 214
VII	5.1	14	9.5	11.0	1.16	20.5	2.16	CAL 203
VII	5.4	10	17.7	11.0	0.62	20.5	1.16	SAL 12
VII	5.9	10	20.5	11.0	0.54	20.5	1.00	CAL 99
VII	5.9	14	25.1	11.0	0.44	20.5	0.82	CAL 101

Table 2b

Shallow-Int-Near-Hard-Vel-Mag 6.0

Mag max 6.4; Int max VIII; Hypo max 25 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VIII	6.3	24	11.6	23.5	2.03	35.0	3.02	ROC 2
VIII	6.3	24	13.8	23.5	1.70	35.0	2.54	ROC 1
VIII	6.2	26	51.9	23.5	0.45	35.0	0.67	CAL 229

Table 2c

Shallow-Int-Near-Hard-Vel-Mag 6.5

Mag max 6.9; Int max IX; Hypo max 35 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
IX	5.4	8	54.2	43.0	0.79	68.0	1.25	MEX 71*
IX	5.4	8	46.3	43.0	0.93	68.0	1.47	MEX 72*
IX	6.9	10	46.2	43.0	0.93	68.0	1.48	CAN 9
IX	6.5	17	113.2	43.0	0.38	68.0	0.60	CAL 23*
IX	6.5	17	57.7	43.0	0.75	68.0	1.18	CAL 22*

Table 2d, 2e

Shallow-Int-Near-Hard-Vel-Mag 7.0

Large mag; Int max X; Hypo max 40 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
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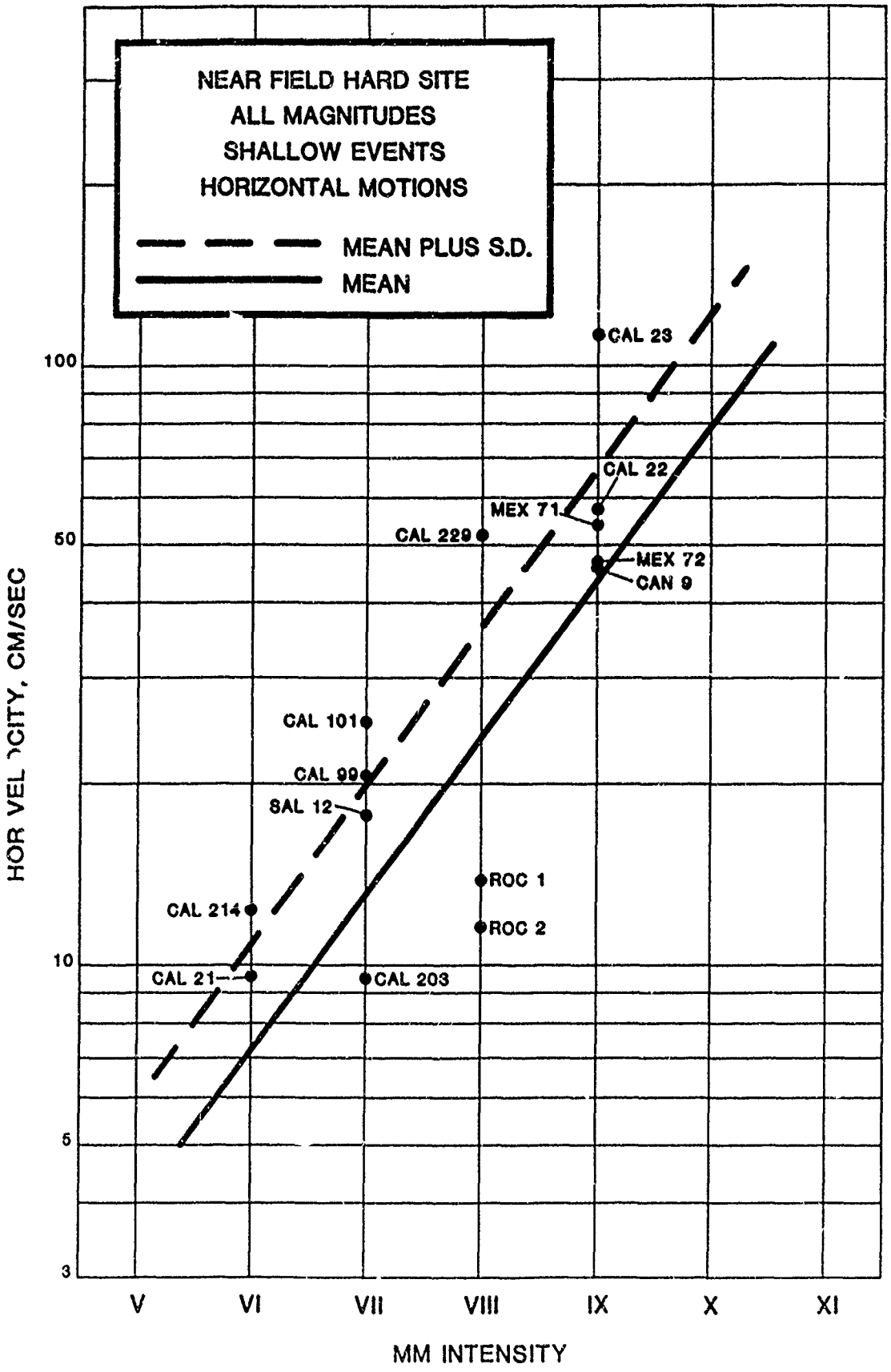


Figure 2. Accelerograms for velocity and intensity for shallow earthquakes at near-field hard sites. (See Tables 2a-e.)

44. Generic accelerograms for near-field ground motion with intensity and duration as the parameters follow. An asterisk after an I.D. number indicates a rock site.

Table 3a

Shallow-Int-Near-Hard-Dur-Mag 5.5

Mag max 5.9; Int max VII; Hypo max 15 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VI	4.8	9	1.4	2.6	+1.2	4.4	+3.0	CAN 2
VI	5.4	15	2.3	2.6	+0.3	4.4	+2.1	CAL 21
VII	5.0	15	1.7	4.5	+2.8	7.3	+5.6	ROC 8
VII	5.9	10	5.6	4.5	-1.1	7.3	+1.7	CAL 99
VII	5.4	10	5.7	4.5	-1.2	7.3	+1.6	SAL 12
VII	5.9	10	7.0	4.5	-2.5	7.3	+0.3	CAL 101

Table 3b

Shallow-Int-Near-Hard-Dur-Mag 6.0

Mag max 6.4; Int max VIII; Hypo max 25

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VIII	6.2	26	8.8	7.2	-1.6	12.4	+3.6	CAL 229

Table 3c

Shallow-Int-Near-Hard-Dur-Mag 6.5

Mag max 6.9; Int max IX; Hypo max 35

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
IX	5.4	8	7.6	12.7	+5.1	21.0	+13.4	MEX 72*
IX	5.4	8	9.0	12.7	+3.7	21.0	+12.0	MEX 71
IX	6.9	10	11.7	12.7	+1.0	21.0	+9.3	CAN 9
IX	6.5	17	12.0	12.7	+0.7	21.0	+9.0	CAL 22*
IX	6.5	17	12.5	12.7	+0.2	21.0	+8.5	CAL 23*
IX	6.9	10	13.9	12.7	-1.2	21.0	+7.1	CAN 10

Table 3d, 3e

Shallow-Int-Near-Hard-Dur-Mag 7.0

Large mag; Int max X; Hypo max 40

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
[NO DATA]								

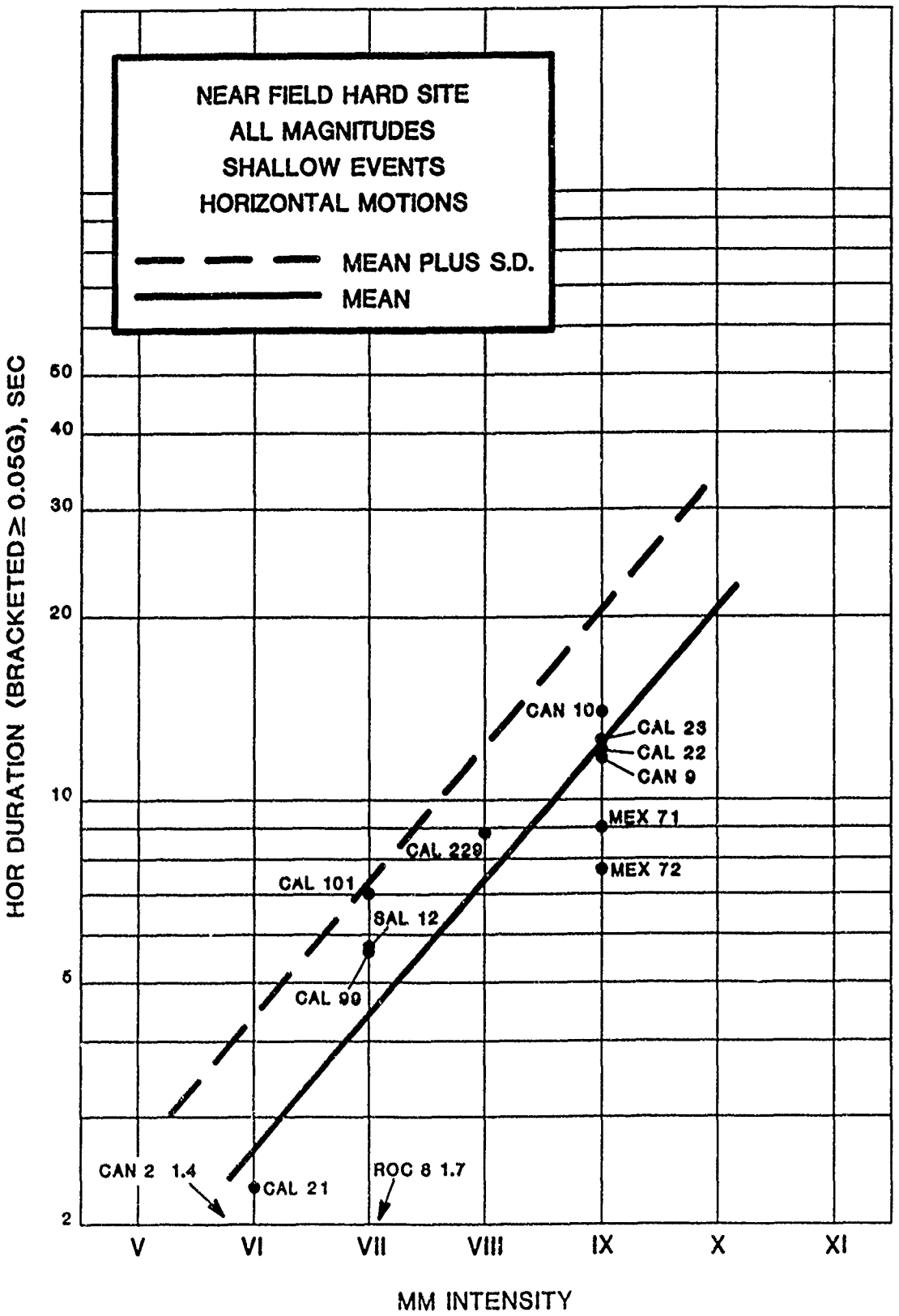


Figure 3. Accelerograms for duration and intensity for shallow earthquakes at near-field hard sites. (See Tables 3a-e.)

PART VI: TABLES AND FIGURES FOR INTENSITY-RELATED PEAK GROUND MOTION FOR NEAR-FIELD SHALLOW EVENTS ON SOFT SITES

45. Generic accelerograms for near-field ground motion with intensity and acceleration as the parameters follow.

Table 4a

Shallow-Int-Near-Soft-Accel-Mag 5.5

Mag max 5.9; Int max VII; Hypo max 15 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VI	5.6	11	159	142	0.83	200	1.26	CAL 173
VI	4.4	13	180	142	0.79	200	1.11	CAL 67
VII	4.2	10	207	192	0.93	275	1.33	NIC 1
VII	5.9	12	184	192	1.04	275	1.49	CAL 247
VII	5.0	13	206	192	0.93	275	1.33	CAL 211
VII	5.1	13	230	192	0.83	275	1.20	CAL 91
VII	5.9	16	252	192	0.76	275	1.09	CAL 104

Table 4b

Shallow-Int-Near-Soft-Accel-Mag 6.0

Mag max 6.4; Int max VIII; Hypo max 25 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VIII	5.4	8	318	260	0.82	380	1.19	NIC 3
VIII	6.2	10	306	260	0.85	380	1.24	CAL 227
VIII	5.6	11	377	260	0.69	380	1.01	CAL 175
VIII	5.9	11	286	260	0.91	380	1.33	CAL 253
VIII	5.9	24	384	260	0.68	380	0.99	CAL 272

Table 4c

Shallow-Int-Near-Soft-Accel-Mag 6.5

Mag max 6.9; Int max IX; Hypo max 35 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
IX	5.4	9	409	370	0.90	520	1.27	SAL 9
IX	6.2	12	268	370	1.38	520	1.94	GRE 9
IX	5.1	13	453	370	0.82	520	1.15	CAL 213
IX	7.1	17	342	370	1.08	520	1.52	CAL 3

Table 4d, 4e

Shallow-Int-Near-Soft-Accel-Mag 7.0

Large Mag; Int max X; Hypo max 40 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
X	5.4	9	409	505	1.23	715	1.75	SAL 9
X	6.2	12	268	505	1.88	715	2.67	GRE 9
X	5.1	13	453	505	1.11	715	1.58	CAL 213
X	7.1	17	342	505	1.48	715	2.09	CAL 3

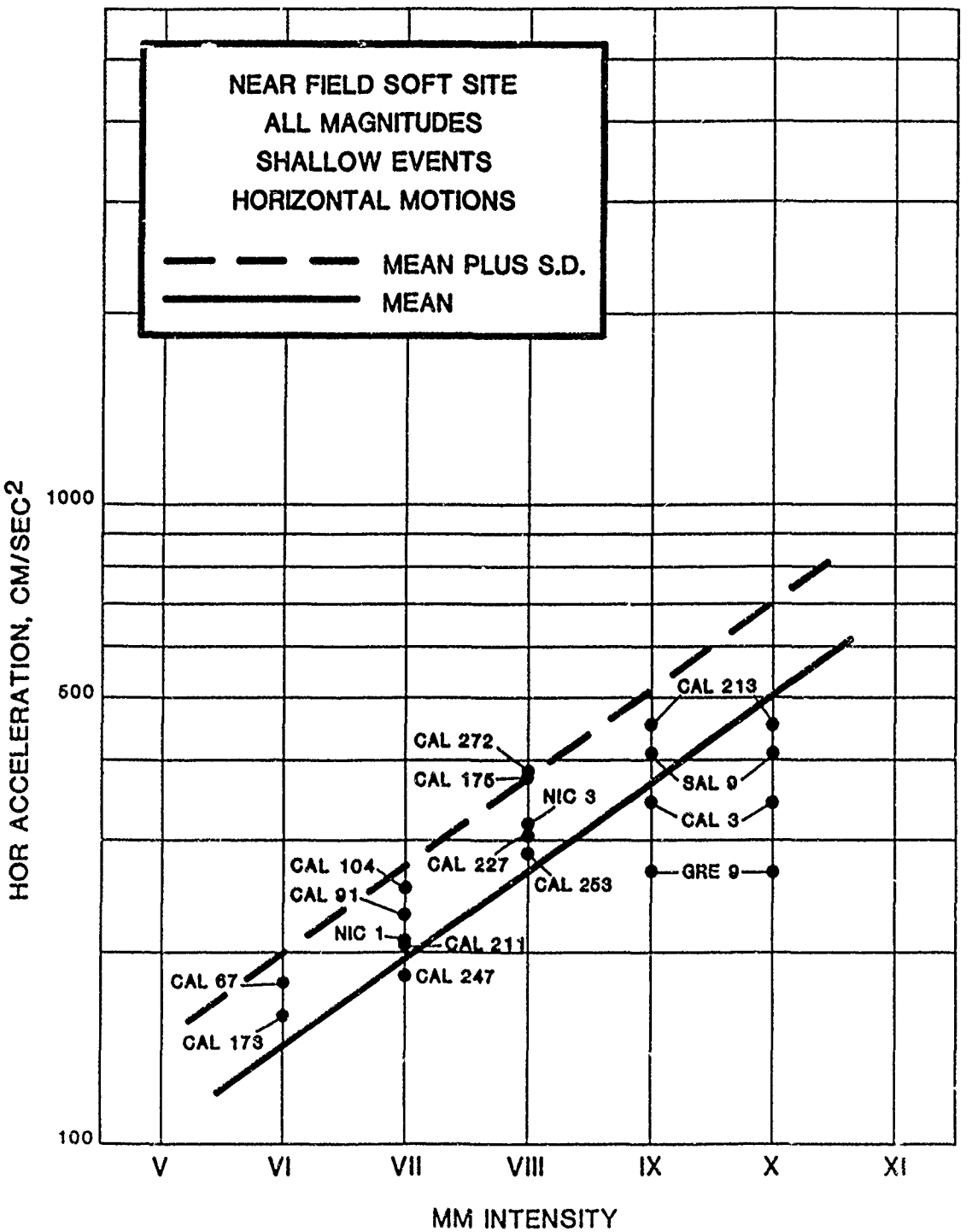


Figure 4. Accelerograms for acceleration and intensity for shallow earthquakes at near-field soft sites. (See Tables 4a-e.)

46. Generic accelerograms for near-field ground motion with intensity and velocity as the parameters follow.

Table 5a

Shallow-Int-Near-Soft-Vel-Mag 5.5

Mag max 5.9; Int max VII; Hypo max 15 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VI	4.4	13	5.9	9.1	1.54	15.0	2.54	CAL 67
VI	5.6	11	7.2	9.1	1.26	15.0	2.08	CAL 173
VII	5.0	13	9.9	14.2	1.43	24.0	2.42	CAL 211
VII	5.9	12	12.9	14.2	1.10	24.0	1.86	CAL 247
VII	4.3	10	14.0	14.2	1.01	24.0	1.71	NIC 1
VII	5.1	13	19.9	14.2	0.71	24.0	1.21	CAL 91
VII	5.9	16	25.2	14.2	0.56	24.0	0.95	CAL 103
VII	6.0	14	23.6	14.2	0.60	24.0	1.02	CAL 163

Table 5b

Shallow-Int-Near-Soft-Vel-Mag 6.0

Mag max 6.4; Int max VIII; Hypo max 25 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VIII	5.4	8	12.8	23.0	1.80	36.5	2.85	GRE 14
VIII	6.0	14	17.7	23.0	1.30	36.5	2.06	CAL 210
VIII	5.9	24	18.6	23.0	1.24	36.5	1.96	CAL 272
VIII	5.9	11	21.7	23.0	1.06	36.5	1.68	CAL 253
VIII	6.7	23	24.6	23.0	0.93	36.5	1.48	GRE 7
VIII	5.6	8	30.3	23.0	0.76	36.5	1.20	NIC 3
VIII	5.6	11	35.8	23.0	0.64	36.5	1.02	CAL 175
VIII	6.7	14	39.2	23.0	0.59	36.5	0.93	CAL 183
VIII	6.2	10	39.6	23.0	0.58	36.5	0.92	CAL 227

Table 5c

Shallow-Int-Near-Soft-Vel-Mag 6.5

Mag max 6.9; Int max IX; Hypo max 35 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
IX	5.1	13	14.3	35.0	2.45	60.0	4.20	CAL 213
IX	6.2	12	23.7	35.0	1.48	60.0	2.53	GRE 9
IX	7.1	17	33.4	35.0	1.05	60.0	1.80	CAL 3
IX	5.4	9	48.8	35.0	0.72	60.0	1.23	SAL 9

Table 5d, 5e

Shallow-Int-Near-Soft-Vel-Mag 7.0

Large Mag; Int X; Hypo max 40 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
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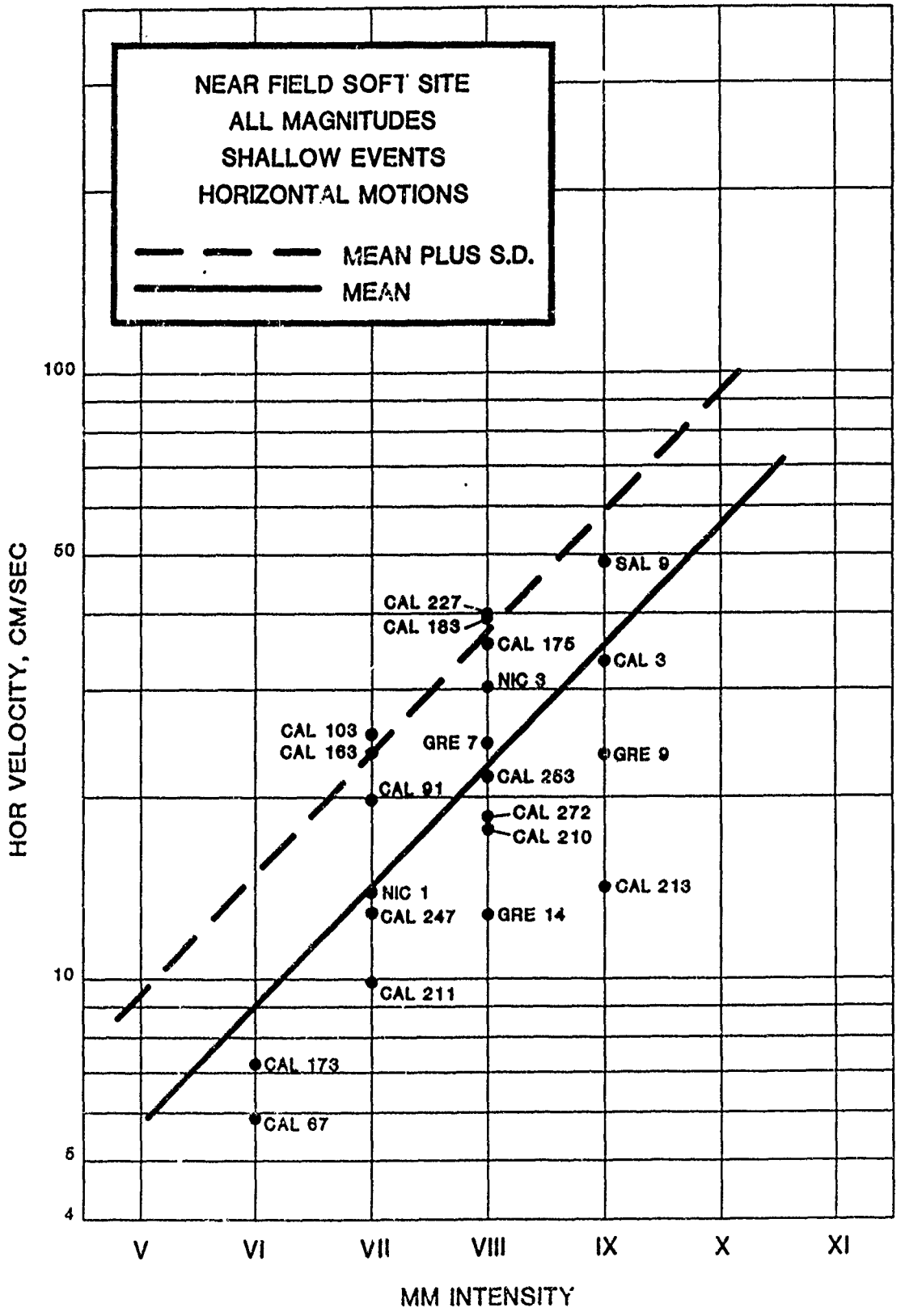


Figure 5. Accelerograms for velocity and intensity for shallow earthquakes at near-field soft sites. (See Tables 5a-e.)

47. Generic accelerograms for near-field ground motion with intensity and duration as the parameters follow.

Table 6a

Shallow-Int Near-Soft-Dur-Mag 5.5

Mag max 5.9; Int max VII; Hypo max 15 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VI	4.4	13	1.0	6.2	+5.2	9.9	+8.9	CAL 67
VI	5.6	11	9.0	6.2	-2.8	9.9	+0.9	CAL 173
VII	5.0	13	1.0	10.0	+9.0	15.5	+14.5	CAL 211
VII	5.9	12	5.5	10.0	+4.5	15.5	+10.0	CAL 47
VII	5.1	13	5.9	10.0	+4.1	15.5	+9.6	CAL 91
VII	4.3	10	6.0	10.0	+4.0	15.5	+9.5	NIC 1
VII	5.9	16	6.5	10.0	+3.5	15.5	+9.0	CAL 163
VII	6.0	14	8.8	10.0	+1.2	15.5	+6.7	CAL 103

Table 6b

Shallow-Int-Near-Soft-Dur-Mag 6.0

Mag max 6.4; Int max VIII; Hypo max 25 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VIII	5.9	24	3.5	16.0	+12.5	25.0	+21.5	CAL 272
VIII	6.0	14	6.1	16.0	+9.9	25.0	+18.9	CAL 210
VIII	5.9	11	6.8	16.0	+9.2	25.0	+18.2	CAL 253
VIII	5.6	11	8.3	16.0	+7.7	25.0	+16.7	CAL 175
VIII	6.2	10	11.6	16.0	+4.4	25.0	+13.4	CAL 227
VIII	5.6	8	13.0	16.0	+3.0	25.0	+12.0	NIC 3
VIII	6.7	23	16.1	16.0	-0.1	25.0	+8.9	GRE 7
VIII	6.7	14	17.5	16.0	-1.5	25.0	+7.5	CAL 184
VIII	6.7	14	17.9	16.0	-1.9	25.0	+7.1	CAL 183

Table 6c

Shallow-Int-Near-Soft-Dur-Mag 6.5

Mag max 6.9; Int max IX; Hypo max 35 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
IX	5.1	13	4.5	25.5	+21.0	40.0	+35.5	CAL 213
IX	5.1	13	5.6	25.5	+19.9	40.0	+34.4	CAL 212
IX	5.4	9	6.2	25.5	+19.3	40.0	+38.8	SAL 9
IX	6.2	12	7.9	25.5	+17.6	40.0	+32.1	GRE 9
IX	7.1	17	29.0	25.0	-3.5	40.0	+11.0	CAL 3

Table 6d, 6e

Shallow-Int-Near-Soft-Dur-Mag 7.0

Large Mag; Int X; Hypo max 40 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.

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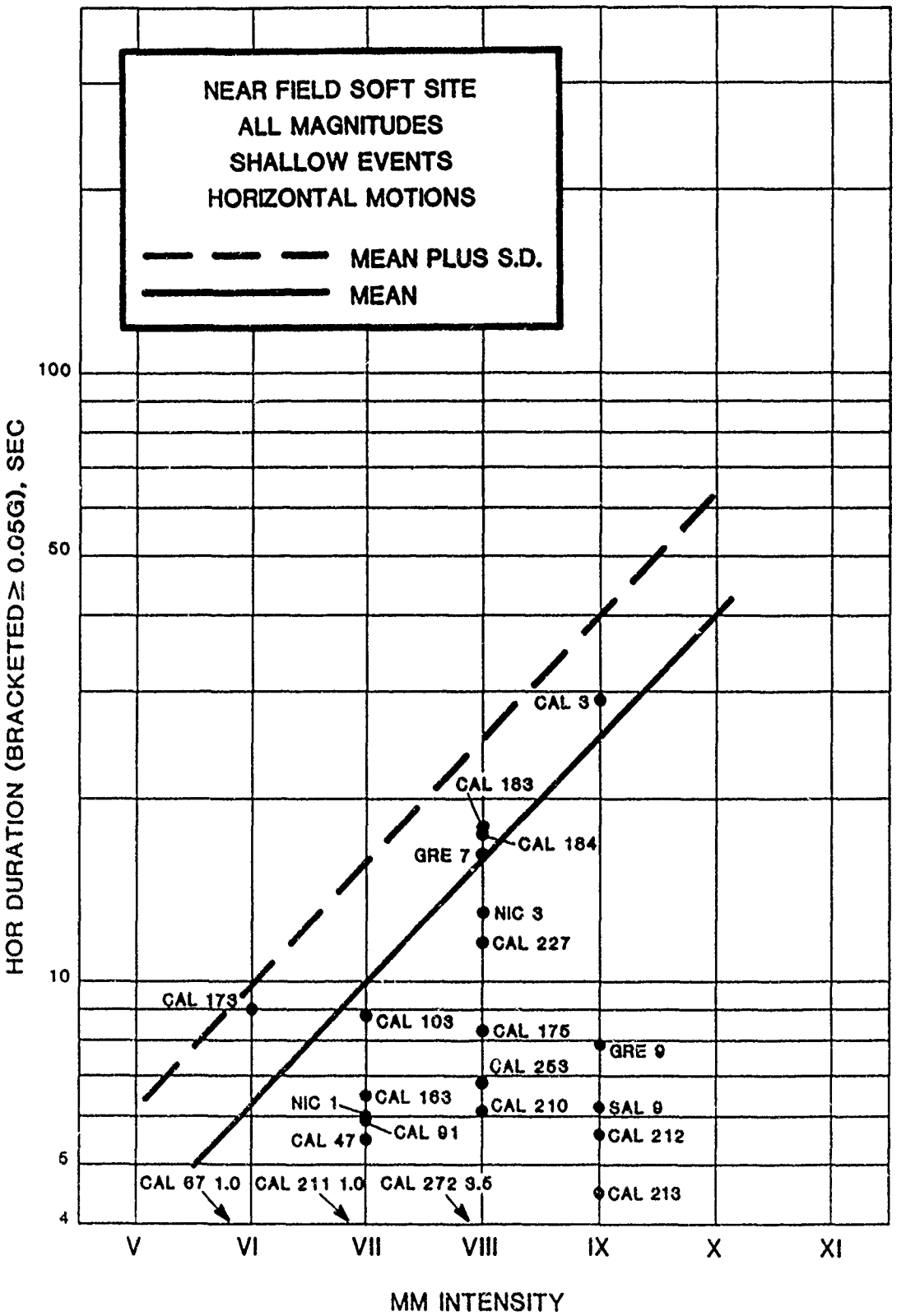


Figure 6. Accelerograms for duration and intensity for shallow earthquakes at near-field soft sites. (See Tables 6a-e.)

PART VII: TABLES AND FIGURES FOR INTENSITY-RELATED PEAK GROUND MOTION FOR FAR-FIELD SHALLOW EVENTS ON HARD SITES

48. Generic accelerograms for far-field ground motion with intensity and acceleration as the parameters follow. An asterisk after an I.D. number indicates a rock site.

Table 7a

Shallow-Int-Far-Hard-Accel-Mag 5.5

Mag max 5.9; Int max VI; Hypo min 20 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VI	4.7	22	156	78	0.50	121	0.78	CAL 64*
VI	6.5	22	209	78	0.37	121	0.58	CAL 63*
VI	5.3	29	199	78	0.39	121	0.61	CAL 70
VI	5.6	35	233	78	0.33	121	0.52	CAL 17
VI	6.7	39	173	78	0.45	121	0.70	CAL 192
VI	6.5	45	166	78	0.47	121	0.73	CAL 51*

Table 7b

Shallow-Int-Far-Hard-Accel-Mag 6.0

Mag max 6.4; Int max VII; Hypo min 25 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VII	5.6	32	264	121	0.46	182	0.70	CAL 19
VII	6.5	37	189	121	0.64	182	0.96	CAL 38*
VII	6.5	39	156	121	0.78	182	1.17	CAL 49
VII	6.5	39	167	121	0.72	182	1.09	CAL 47*
VII	6.2	40	183	121	0.66	182	0.99	CAL 216
VII	6.6	58	189	121	0.64	182	0.96	CAL 139*

Table 7c

Shallow-Int-Far-Hard-Accel-Mag 6.5

Mag max 6.9; Int max VIII; Hypo min 35 mi

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VIII	6.5	41	222	190	0.86	290	1.31	ITA 20
VIII	6.5	41	321	190	0.59	290	0.90	ITA 21
VIII	5.9	45	527	190	0.36	290	0.55	CAL 270
VIII	5.9	45	398	190	0.48	290	0.73	CAL 271

Table 7d, 7e

Shallow-Int-Far-Hard-Accel-Mag 7.0

Large Mag; Int IX; Hypo min 40 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.

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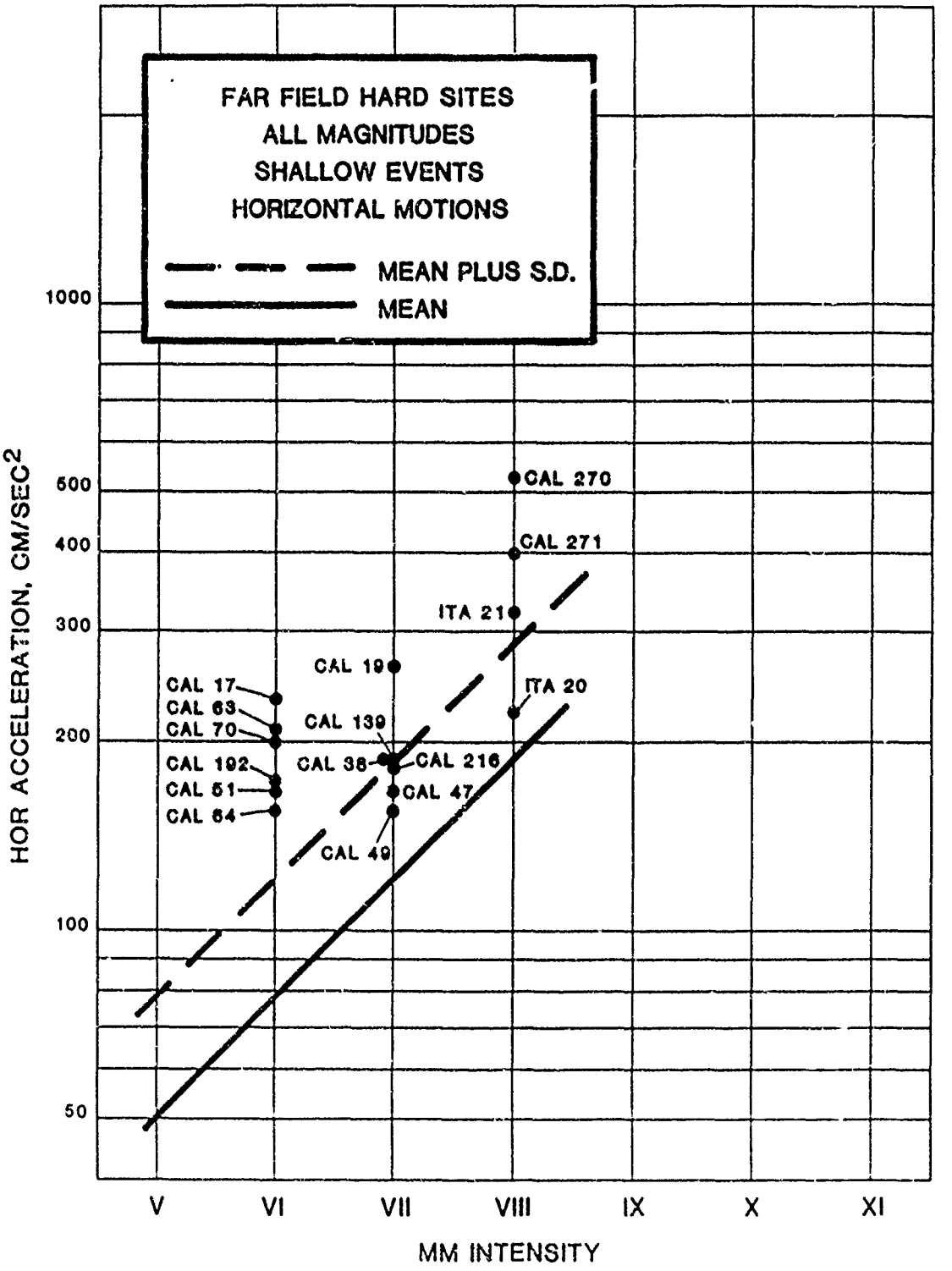


Figure 7. Accelerograms for acceleration and intensity for shallow earthquakes at far-field hard sites. (See Tables 7a-e.)

49. Generic accelerograms for far-field ground motion with intensity and velocity as the parameters follow. An asterisk after an I.D. number indicates a rock site.

Table 8a

Shallow-Int-Far-Hard-Vel-Mag 5.5

Mag max 5.9; Int max VI; Hypo min 20 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VI	4.7	22	5.8	4.6	0.79	7.2	1.24	CAL 64*
VI	5.3	29	5.9	4.6	0.78	7.2	1.22	CAL 70
VI	6.5	45	6.6	4.6	0.70	7.2	1.09	CAL 51*
VI	4.7	22	7.4	4.6	0.62	7.2	0.97	CAL 63*
VI	5.6	35	10.8	4.6	0.43	7.2	0.67	CAL 17
VI	5.6	35	11.8	4.6	0.40	7.2	0.61	CAL 16

Table 8b

Shallow-Int-Far-Hard-Vel-Mag 6.0

Mag max 6.4; Int max VII; Hypo min 25 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VII	6.2	40	6.6	8.3	1.26	13.2	2.00	CAL 216
VII	6.6	58	9.0	8.3	0.92	13.2	1.47	CAL 139*
VII	6.5	37	11.6	8.3	0.72	13.2	1.14	CAL 38*
VII	5.6	32	14.5	8.3	0.57	13.2	0.91	CAL 19
VII	6.5	39	14.6	8.3	0.57	13.2	0.90	CAL 47*
VII	6.5	39	16.2	8.3	0.51	13.2	0.81	CAL 49

Table 8c

Shallow-Int-Far-Hard-Vel-Mag 6.5

Mag max 6.9; Int max VIII; Hypo min 35 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VIII	5.9	45	19.2	15.0	0.78	24.0	1.25	CAL 271
VIII	5.9	45	24.2	15.0	0.62	24.0	0.99	CAL 270
VIII	6.5	41	42.4	15.0	0.35	24.0	0.57	ITA 20

Table 8d, 8e

Shallow-Int-Far-Hard-Vel-Mag 7.0

Large Mag; Int IX; Hypo min 40 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
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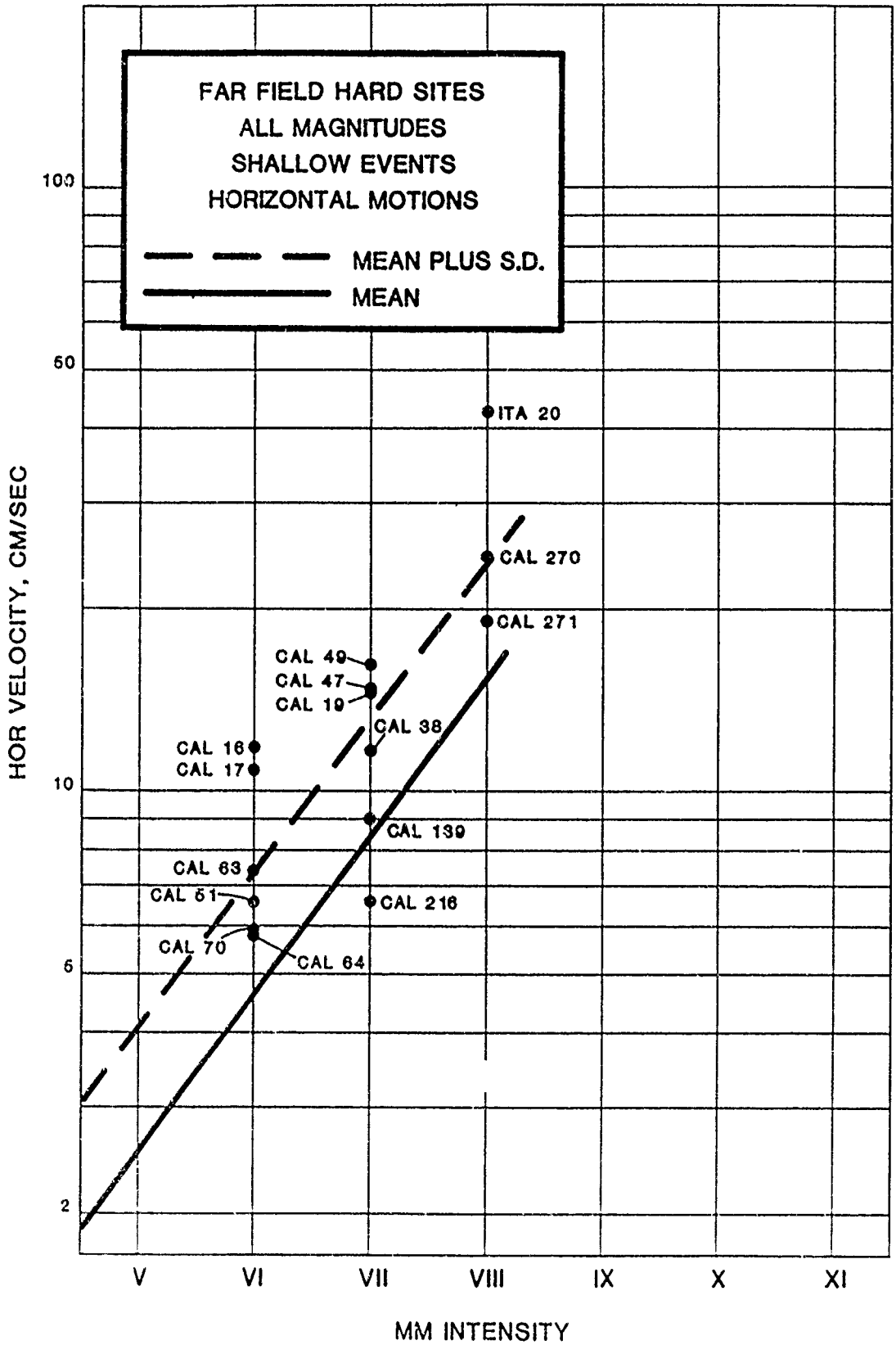


Figure 8. Accelerograms for velocity and intensity for shallow earthquakes at far-field hard sites. (See Tables 8a-e.)

50. Generic accelerograms for far-field ground motion with intensity and duration as the parameters follow. An asterisk after an I.D. number indicates a rock site.

Table 9a

Shallow-Int-Far-Hard-Dur-Mag 5.5

Mag max 5.9; Int max VI; Hypo min 20 km

Int	Mag	Hypo km	Dur	Mean Dur	Scale x	Plus Sigma	Scale X	I.D. No.
VI	5.3	29	2.6	3.0	+0.4	6.3	+3.7	CAL 70
VI	4.7	22	3.0	3.0	+0.0	6.3	+3.3	CAL 64*
VI	4.7	22	4.2	3.0	-1.2	6.3	+2.1	CAL 63*
VI	5.6	35	8.0	3.0	-5.0	6.3	-1.7	CAL 17
VI	5.6	35	8.5	3.0	-5.5	6.3	-2.2	CAL 16
VI	6.5	45	8.5	3.0	-5.5	6.3	-2.2	CAL 51*
VI	6.7	39	8.6	3.0	-5.6	6.3	-2.3	CAL 192

Table 9b

Shallow-Int-Far-Hard-Dur-Mag 6.0

Mag max 6.4; Int max VII; Hypo min 25 km

Int	Mag	Hypo km	Dur	Mean Dur	Scale x	Plus Sigma	Scale X	I.D. No.
VII	5.6	32	3.2	5.1	+1.9	10.9	+6.7	CAL 19
VII	6.6	58	4.9	5.1	+0.2	10.9	+6.0	CAL 139*
VII	6.5	39	6.0	5.1	-0.9	10.9	+4.9	CAL 49
VII	6.5	37	6.6	5.1	-1.5	10.9	+4.3	CAL 38*
VII	6.2	40	9.9	5.1	-4.8	10.9	+1.0	CAL 216
VII	6.5	39	10.8	5.1	-5.7	10.9	+0.1	CAL 47*

Table 9c

Shallow-Int-Far-Hard-Dur-Mag 6.5

Mag max 6.9; Int max VIII; Hypo min 35 km

Int	Mag	Hypo km	Dur	Mean Dur	Scale x	Plus Sigma	Scale X	I.D. No.
VIII	6.2	26	8.6	8.8	+0.2	18.0	+9.4	CAL 228
VIII	6.2	26	8.8	8.8	+0.0	18.0	+9.2	CAL 229
VIII	5.9	45	9.5	8.8	-0.7	18.0	+8.5	CAL 271
VIII	5.9	45	12.0	8.8	-3.2	18.0	+6.0	CAL 270

Table 9d, 9e

Shallow-Int-Far-Hard-Dur-Mag 7.0

Large Mag; Int max IX; Hypo min 40 km

Int	Mag	Hypo km	Dur	Mean Dur	Scale x	Plus Sigma	Scale X	I.D. No.

[NO DATA]

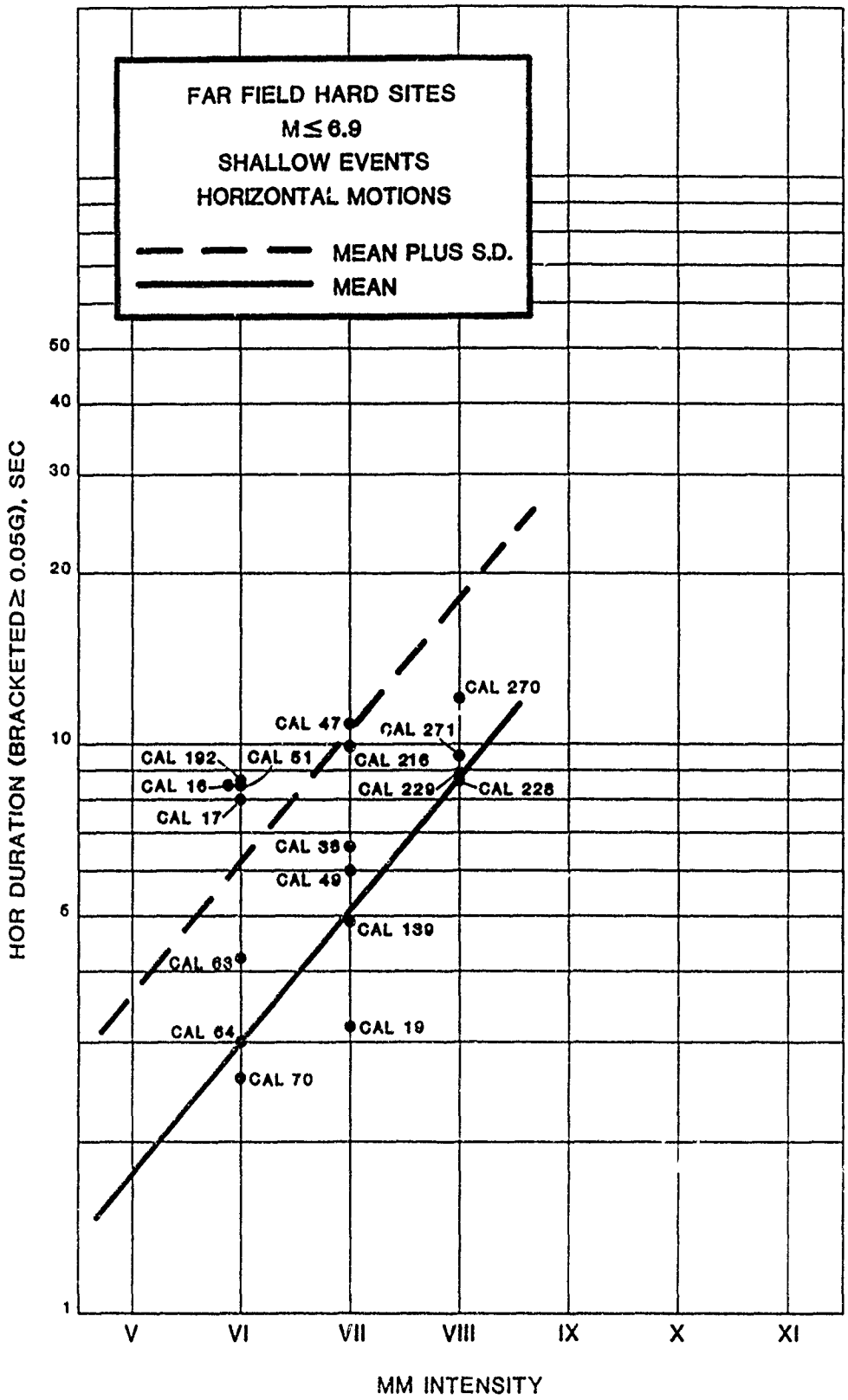


Figure 9. Accelerograms for duration and intensity for shallow earthquakes at far-field hard sites. (See Tables 9a-e.)

PART VIII: TABLES AND FIGURES FOR INTENSITY-RELATED PEAK GROUND MOTION FOR FAR-FIELD SHALLOW EVENTS ON SOFT SITES

51. Generic accelerograms for far-field ground motion for soft sites with intensity and acceleration as the parameters follow.

Table 10a

Shallow-Int-Far-Soft-Accel-Mag 5.5

Mag max 5.9; Int max VI; Hypo min 20 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VI	5.6	33	426	79	0.19	121	0.28	CAL 14
VI	5.6	33	348	79	0.23	121	0.35	CAL 15
VI	5.6	35	232	79	0.34	121	0.52	CAL 20

Table 10b

Shallow-Int-Far-Soft-Accel-Mag 6.0

Mag max 6.4; Int max VII; Hypo min 25 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VII	6.2	38	329	121	0.35	189	0.57	CAL 219
VII	5.9	27	246	121	0.49	189	0.77	CAL 275
VII	6.2	39	210	121	0.58	189	0.90	CAL 223
VII	5.6	28	169	121	0.72	189	1.12	CAL 12
VII	6.2	39	154	121	0.79	189	1.23	CAL 224

Table 10c

Shallow-Int-Far-Soft-Accel-Mag 6.5

Mag max 6.9; Int max VIII; Hypo min 35 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VII	6.2	39	329	189	0.57	285	0.87	CAL 219
VIII	6.7	35	234	189	0.81	285	1.22	GRE 8
VIII	5.9	41	234	189	0.81	285	1.22	CAL 5
VII	6.6	44	217	189	0.87	285	1.31	CAL 124
VIII	6.5	92	207	189	0.91	285	1.38	PER 3
VII	6.5	40	207	189	0.91	285	1.38	CAL 27
VII	6.5	43	197	189	0.96	285	1.45	CAL 10
VIII	6.6	92	192	189	0.98	285	1.48	PER 4

Table 10d

Shallow-Int-Far-Soft-Accel-Mag 7.0

Mag max 7.4; Int max IX; Hypo min 40 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VIII	5.9	41	234	285	1.22	350	1.50	CAL 5
VIII	6.5	-92	207	285	1.38	350	1.69	PER 3
VIII	6.6	92	192	285	1.48	350	1.82	PER 4

Table 10e

Shallow-Int-Far-Soft-Accel-Mag 7.5

Large Mag; Int max X; Hypo min 40 km

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.

[NO DATA]

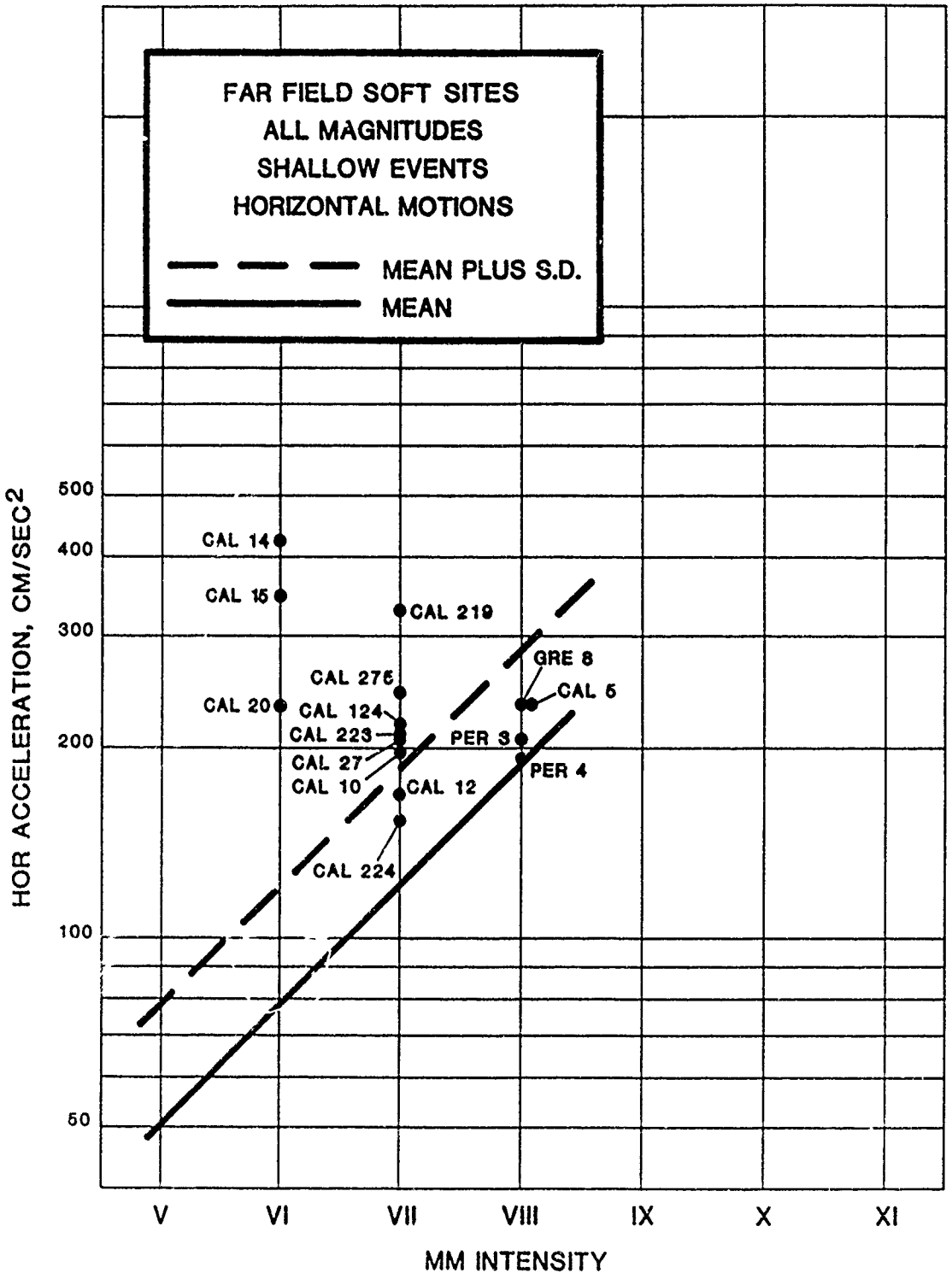


Figure 10. Accelerograms for acceleration and MM intensity for shallow earthquakes at far-field soft sites. (See Tables 10a-e.)

52. Generic accelerograms for soft site, far-field ground motion with intensity and velocity as the parameters follow.

Table 11a

Shallow-Int-Far-Soft-Vel-Mag 5.5

Mag max 5.9; Int max VI; Hypo min 20 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VI	5.6	33	25.4	7.0	0.28	11.0	0.43	CAL 14
VI	5.6	33	22.5	7.0	0.31	11.0	0.49	CAL 15
VI	5.6	35	11.9	7.0	0.59	11.0	0.92	CAL 20

Table 11b

Shallow-Int-Far-Soft-Vel-Mag 6.0

Mag max 6.4; Int max VII; Hypo min 25 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VII	6.2	38	16.7	13.0	0.78	20.0	1.20	CAL 219
VII	6.2	39	12.5	13.0	1.04	20.0	1.60	CAL 223
VII	5.6	28	10.8	13.0	1.20	20.0	1.85	CAL 12
VII	5.9	27	8.7	13.0	1.49	20.0	2.30	CAL 275
VII	6.2	39	5.0	13.0	2.60	20.0	4.00	CAL 224

Table 11c

Shallow-Int-Far-Soft-Vel-Mag 6.5

Mag max 6.9; Int max VIII; Hypo min 35 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VII	6.6	44	37.1	24.0	0.65	37.0	1.00	CAL 124
VII	6.5	43	26.0	24.0	0.92	37.0	1.42	CAL 10
VIII	6.7	35	22.5	24.0	1.07	37.0	1.64	GRE 8
VII	6.5	40	21.1	24.0	1.14	37.0	1.75	CAL 27
VIII	5.9	41	21.1	24.0	1.14	37.0	1.75	CAL 5
VIII	6.6	92	20.5	24.0	1.17	37.0	1.80	PER 4
VIII	6.5	92	16.9	24.0	1.42	37.0	2.19	PER 3
VII	6.2	39	16.7	24.0	1.44	37.0	2.22	CAL 219

Table 11d

Shallow-Int-Far-Soft-Vel-Mag 7.0

Mag max 7.4; Int max IX; Hypo min 40 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VIII	5.9	41	21.1	35.0	1.66	50.0	2.37	CAL 5
VIII	6.6	92	20.5	35.0	1.71	50.0	2.44	PER 4
VIII	6.5	92	16.9	35.0	2.07	50.0	2.96	PER 3

Table 11e

Shallow-Int-Far-Soft-Vel-Mag 7.5

Large Mag; Int max X; Hypo min 40 km

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
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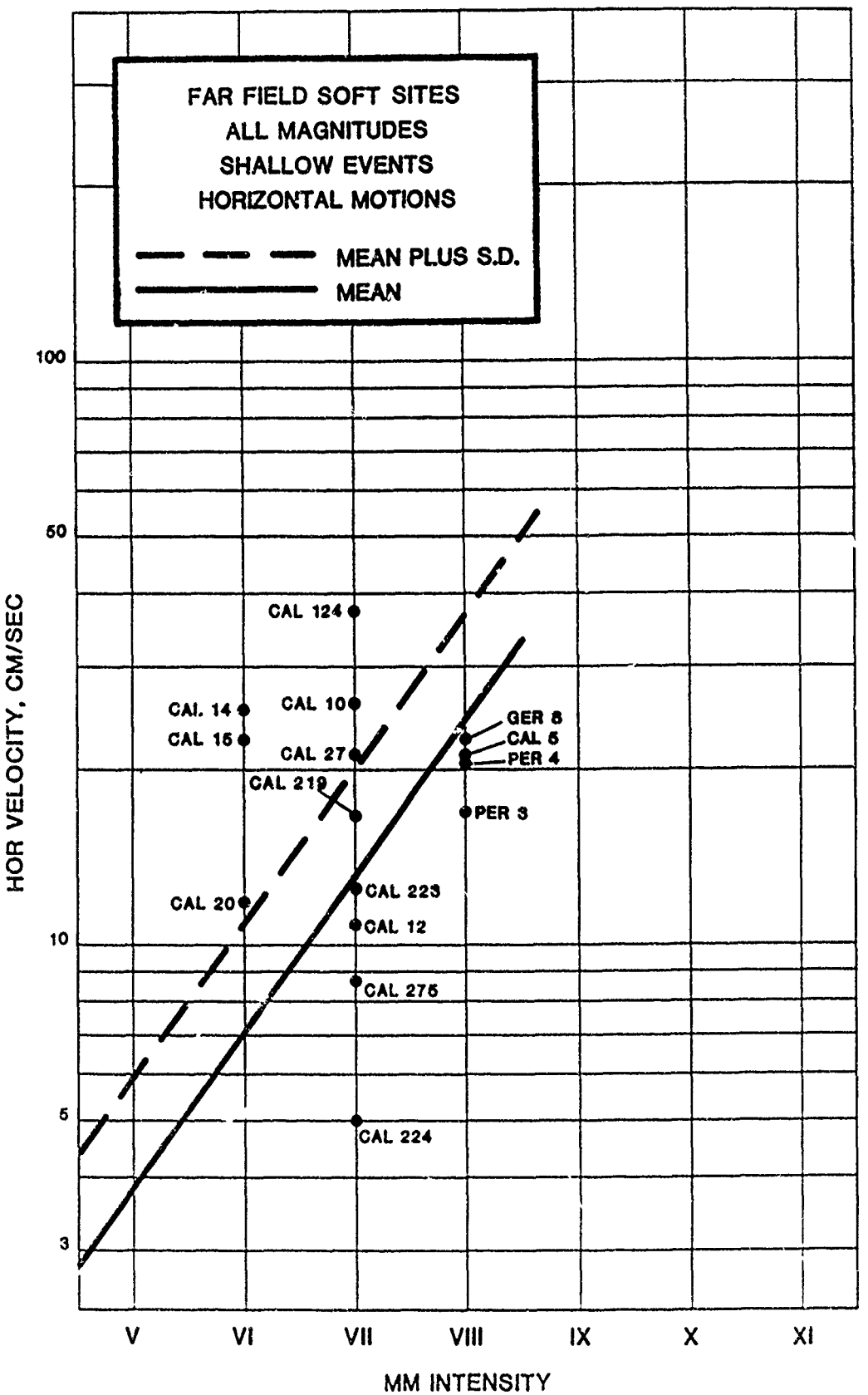


Figure 11. Accelerograms for velocity and intensity for shallow earthquakes at far-field soft sites. (See Tables 11a-e.)

53. Generic accelerograms for far-field ground motion for soft sites with intensity and duration as the parameters follow.

Table 12a

Shallow-Int-Far-Soft-Dur-Mag 5.5

Mag max 5.9; Int max VI; Hypo min 20 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VI	5.6	33	8.0	3.0	-5.0	6.2	-1.8	CAL 14
VI	5.6	33	7.4	3.0	-4.4	6.2	-1.2	CAL 15
VI	5.6	35	2.0	3.0	+1.0	6.2	+4.2	CAL 20

Table 12b

Shallow-Int-Far-Soft-Dur-Mag 6.0

Mag max 6.4; Int Max VII; Hypo min 25 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VII	6.2	38	12.7	5.1	-7.6	10.9	-1.8	CAL 219
VII	5.6	32	10.9	5.1	-5.8	10.9	0.0	CAL 13
VII	6.2	39	8.1	5.1	-3.0	10.9	+2.0	CAL 224
VII	5.6	28	8.0	5.1	-2.9	10.9	+2.9	CAL 12
VII	6.2	39	7.4	5.1	-2.3	10.9	+3.5	CAL 223
VII	5.9	27	5.6	5.1	-0.5	10.9	+5.4	CAL 275

Table 12c

Shallow-Int-Far-Soft-Dur-Mag 6.5

Mag max 6.9; Int max VIII; Hypo min 35 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VII	6.5	43	18.0	8.8	-9.2	18.2	+0.2	CAL 10
VIII	6.7	35	17.2	8.8	-8.4	18.2	+1.0	GRE 8
VII	6.2	39	12.7	8.8	-3.9	18.2	+5.5	CAL 219
VII	6.6	44	11.3	8.8	-2.5	18.2	+6.9	CAL 124
VII	6.5	40	9.5	8.8	-0.7	18.2	+8.7	CAL 27
VIII	6.5	92	5.3	8.8	+3.5	18.2	+12.9	PER 3
VIII	6.6	92	5.2	8.8	+3.6	18.2	+13.0	PER 4
VIII	5.9	41	4.0	8.8	+4.4	18.2	+14.2	CAL 5

Table 12d

Shallow-Int-Far-Soft-Dur-Mag 7.0

Mag max 7.4; Int max IX; Hypo min 40 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VIII	6.5	92	5.3	14.0	+8.7	24.0	--	PER 3
VIII	6.6	92	5.2	14.0	+8.8	24.0	--	PER 4
VIII	5.9	41	4.0	14.0	+10.0	24.0	--	CAL 5

Table 12e

Shallow-Int-Far-Soft-Dur-Mag 7.5

Large Mag; Int max X: Hypo min 40 km

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.

[NO DATA]

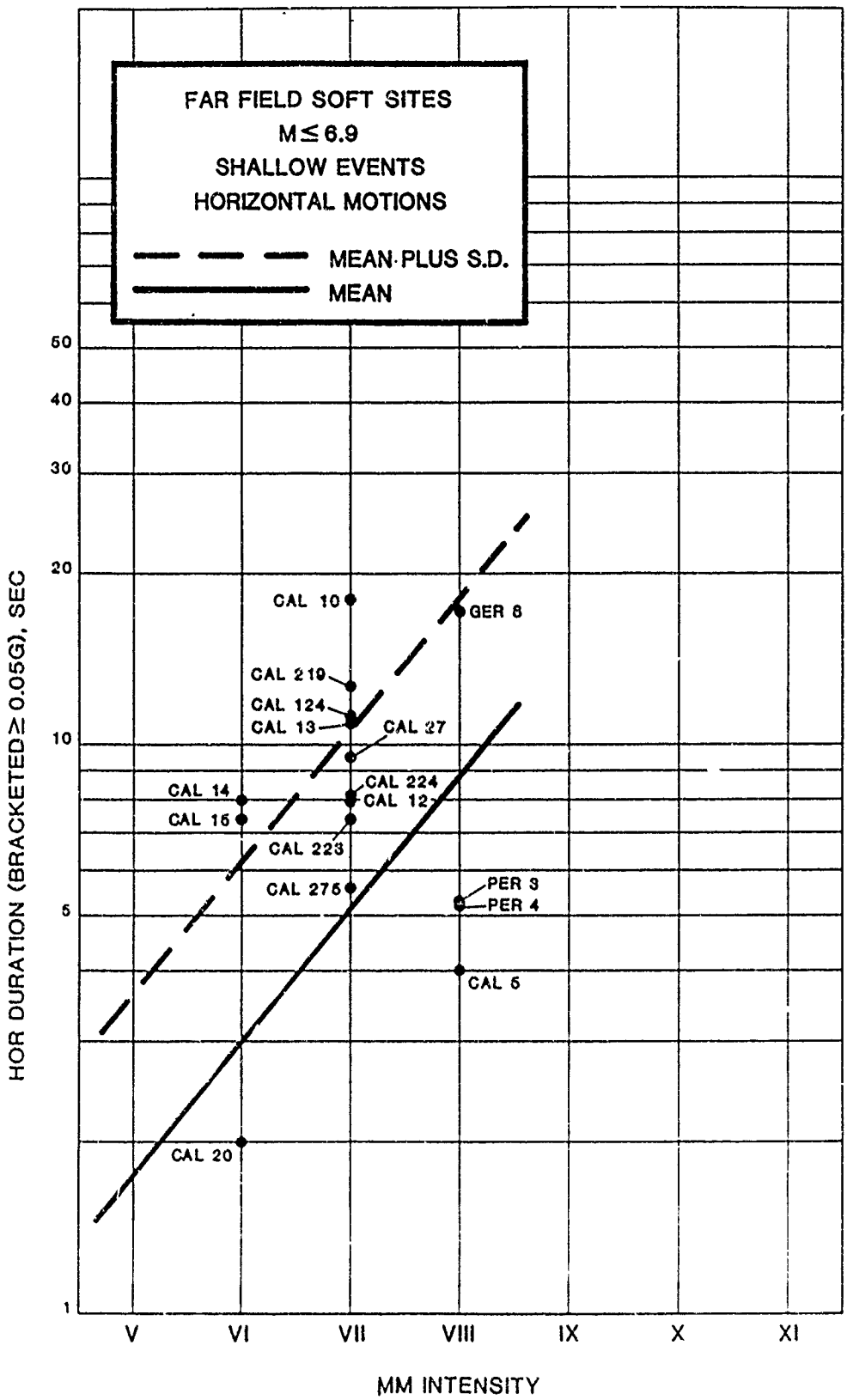


Figure 12. Accelerograms for duration and intensity for shallow earthquakes, M ≤ 6.9 at far-field soft sites. (See Tables 12a-e).

PART IX: TABLES AND FIGURES FOR INTENSITY-RELATED PEAK GROUND MOTION FOR FAR-FIELD DEEP EVENTS ON HARD SITES

54. Generic accelerograms for deep event, far-field ground motion at hard sites with intensity and acceleration as the parameters follow:

Table 13

Deep-Int-Hard-Accel

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
IV	7.1	82	182	42	0.23	79	0.43	AKA 1
VIII	7.8	71	656	190	0.29	285	0.43	CHL 11
VIII	7.8	71	418	190	0.45	285	0.68	CHL 12
VIII	7.8	54	350	190	0.54	285	0.81	CHL 35
VIII	7.9	285	284	190	0.67	285	1.00	SOL 1
VIII	7.9	285	270	190	0.70	285	1.06	SOL 2
VIII	7.8	54	224	190	0.85	285	1.27	CHL 36
VIII	7.8	58	176	190	1.08	285	1.62	CHL 31
VIII	7.8	68	161	190	1.18	285	1.78	CHL 32

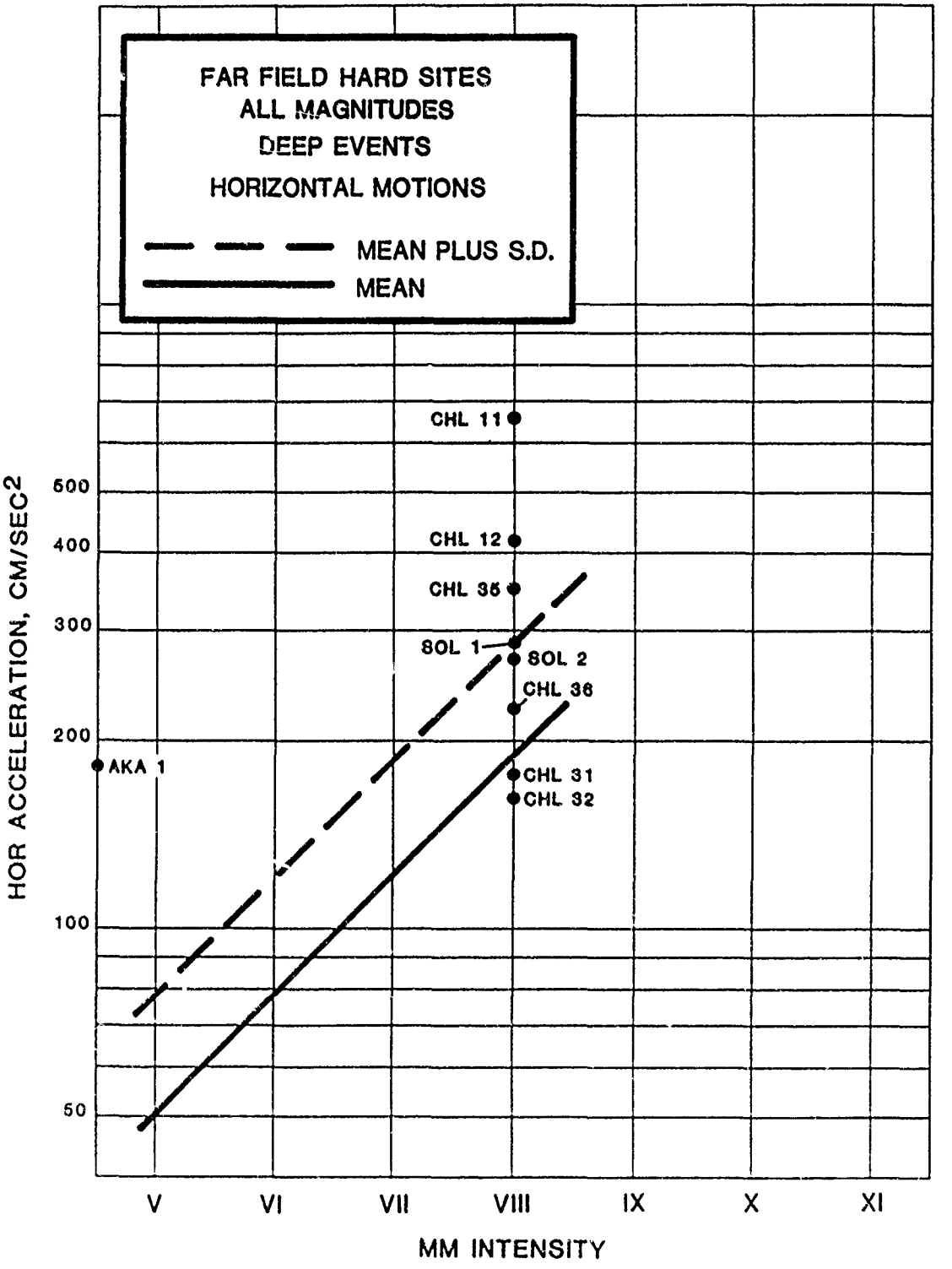


Figure 13. Accelerograms for acceleration and intensity for deep earthquakes at far-field hard sites. (See Table 13.)

55. Generic accelerograms for deep event, far-field ground motion at hard sites with intensity and velocity as the parameters follow.

Table 14

Deep-Int-Hard-Vel

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
IV	7.1	82	8.0	2.0	0.25	3.0	0.38	AKA 1
VIII	7.9	285	28.6	15.8	0.55	25.0	0.87	SOL 1
VIII	7.9	285	17.9	15.8	0.88	25.0	1.40	SOL 2

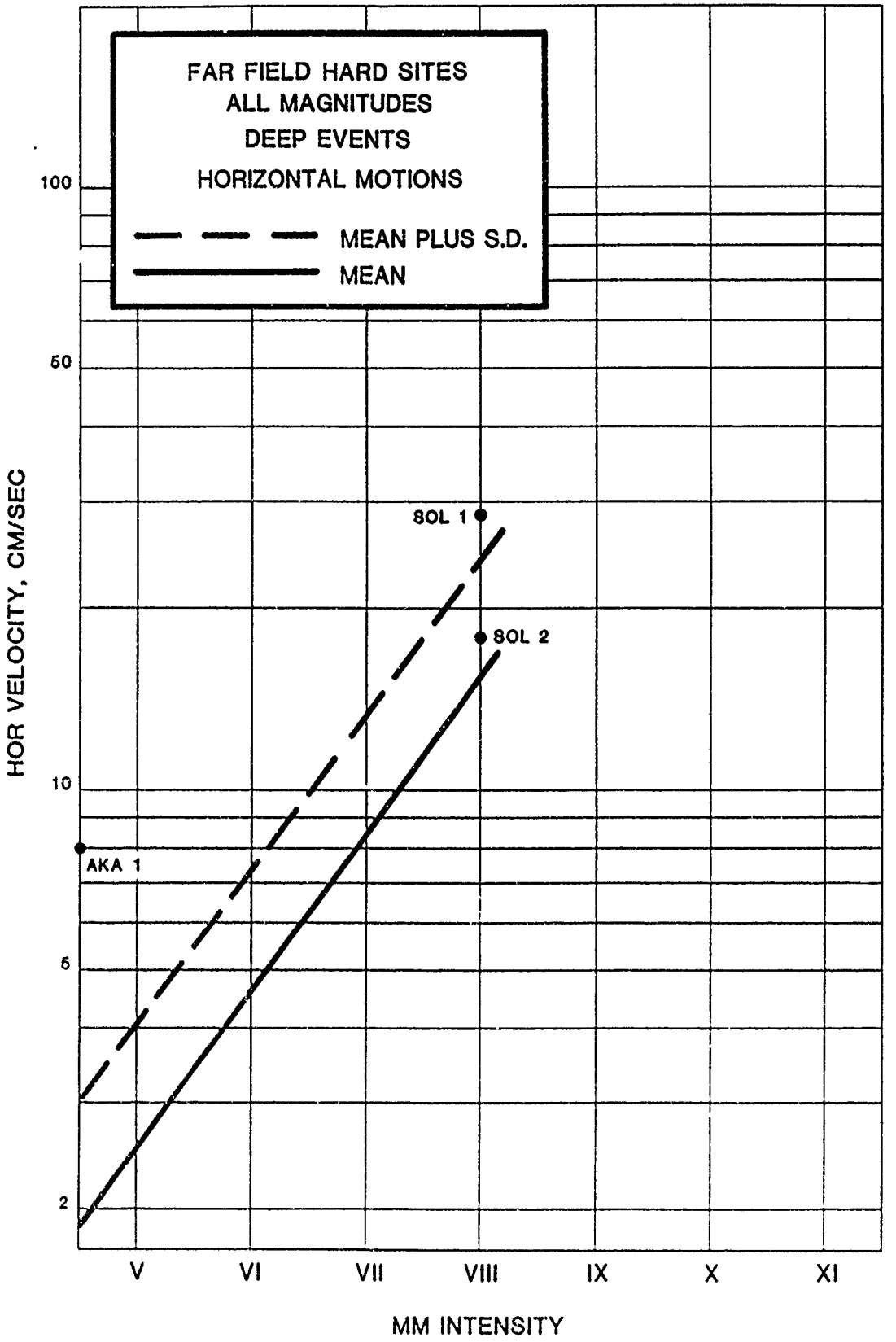


Figure 14. Accelerograms for velocity and intensity at far-field, hard sites for deep earthquakes. (See Table 14.)

56. Generic accelerograms for deep event, far-field ground motion at hard sites with intensity and duration as the parameters follow.

Table 15a

Deep-Int-Hard-Dur-Mag max 6.9

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
[NO DATA]								

Table 15b

Deep-Int-Hard-Dur-Mag max 7.5

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
IV	7.1	82	8.1	5.0	-3.1	10.0	+1.9	AKA 1

Table 15c

Deep-Int-Hard-Dur-Mag min 7.6

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VIII	7.8	71	74.7	55.0	-19.7	116.0	+41.3	CHL 11
VIII	7.8	71	67.6	55.0	-12.6	116.0	+48.4	CHL 12
VIII	7.8	54	61.4	55.0	-6.4	116.0	+54.6	CHL 36
VIII	7.8	54	58.7	55.0	-3.7	116.0	+57.3	CHL 35
VIII	7.9	285	45.9	55.0	+9.1	116.0	+70.1	SOL 1
VIII	7.9	285	39.8	55.0	+15.2	116.0	+76.2	SOL 2
VIII	7.8	68	36.5	55.0	+18.5	116.0	+79.5	CHL 32
VIII	7.8	68	36.1	55.0	+18.9	116.0	+79.9	CHL 31

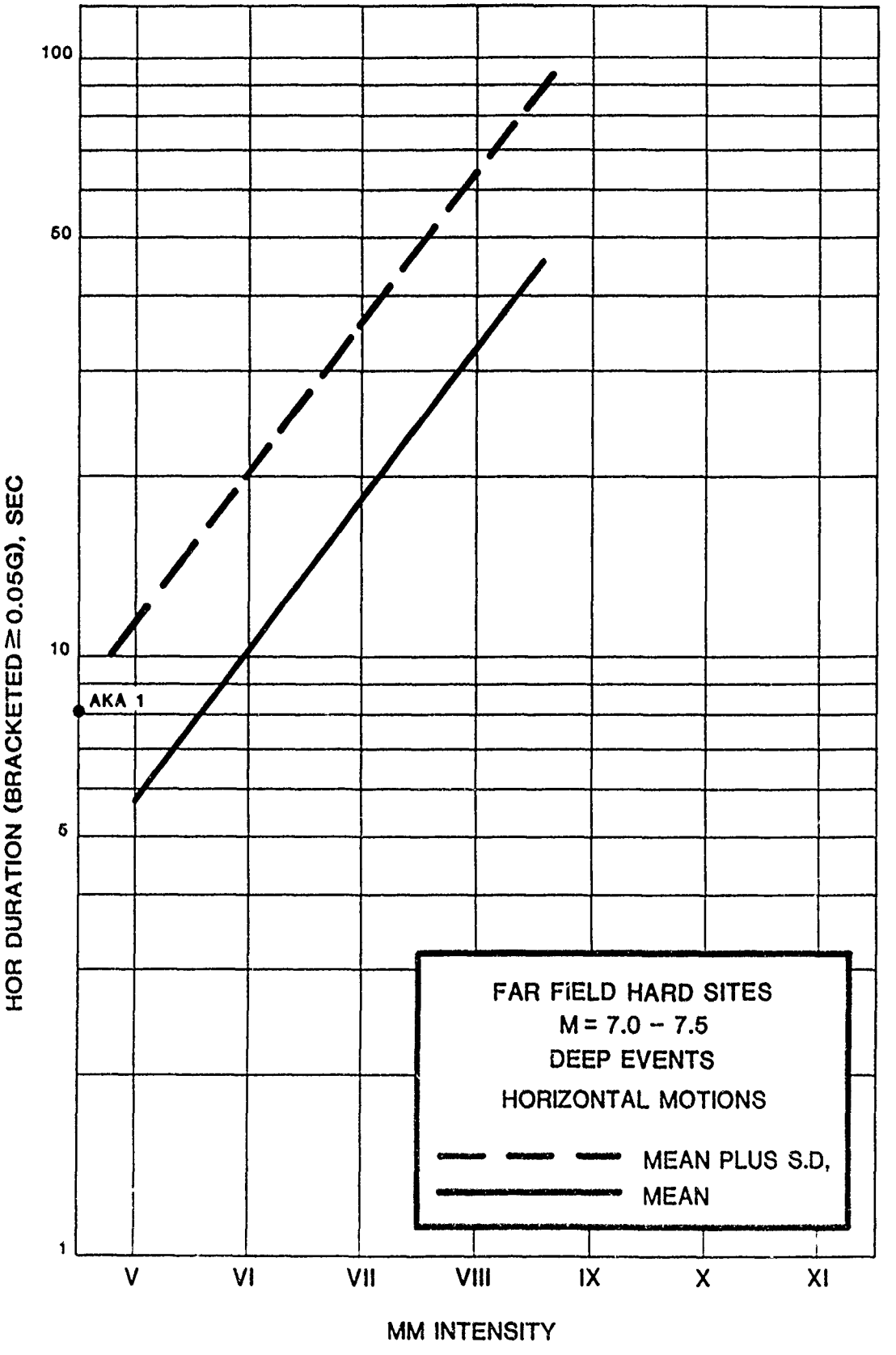


Figure 15a-b. Accelerograms for duration and intensity at far-field, hard sites for deep earthquakes, M = 7.0-7.5. (See Tables 15a-b.)

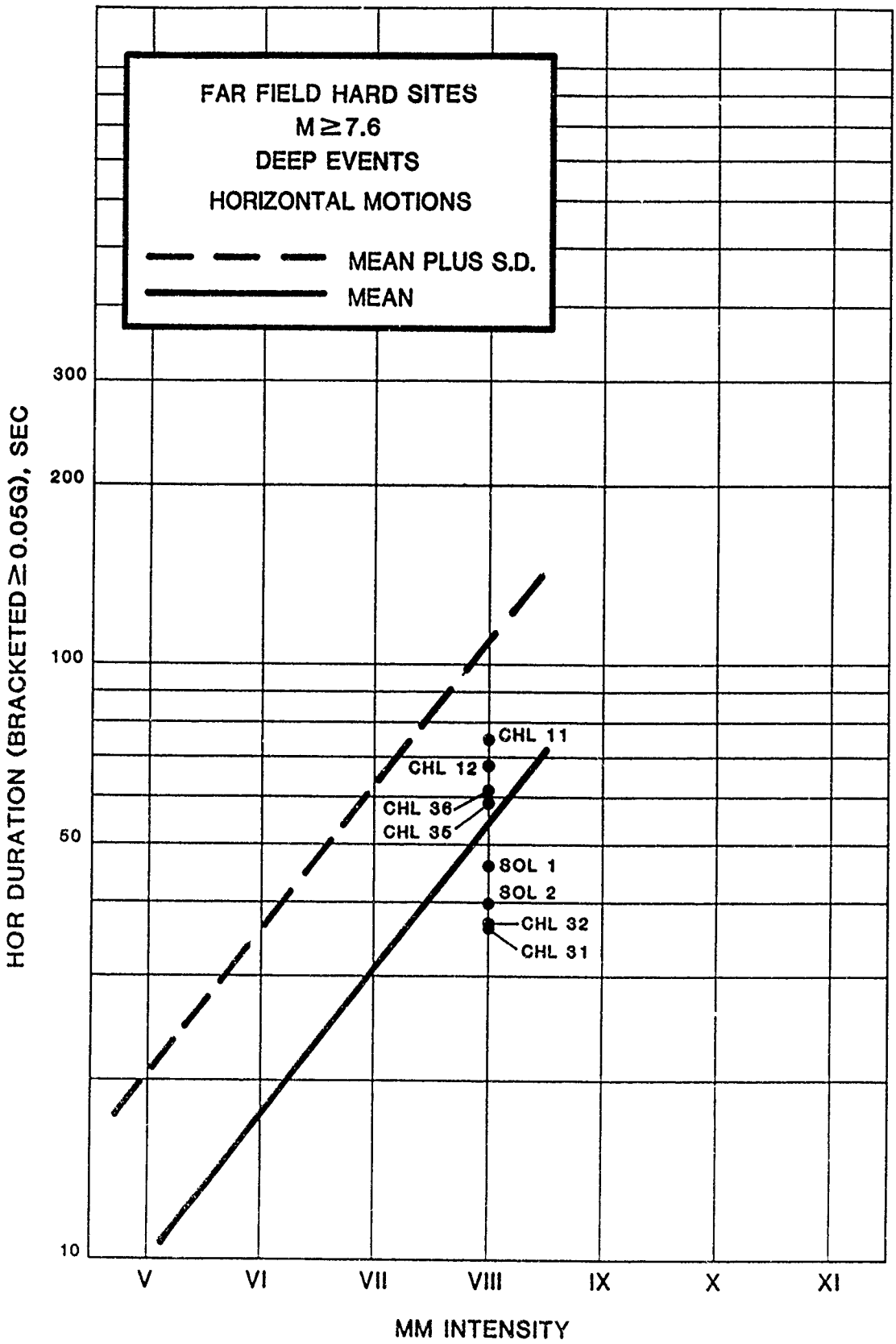


Figure 15c. Accelerograms for duration and intensity at far-field, hard sites for deep earthquakes, M ≥ 7.6. (See Table 15c.)

PART X: TABLES AND FIGURES FOR INTENSITY-RELATED PEAK GROUND MOTION FOR FAR-FIELD DEEP EVENTS ON SOFT SITES

57. Generic accelerograms for deep event, far-field ground motion at soft sites with intensity and acceleration as the parameters follow.

Table 16

Deep-Int-Soft-Accel

Int	Mag	Hypo km	Acc gal	Mean gal	Scale x	Plus Sigma	Scale X	I.D. No.
VII	6.3	239	269	122	0.45	188	0.70	PER 1
VII	7.2	199	202	122	0.60	188	0.93	ROM 1
VII	6.5	77	194	122	0.63	188	0.97	WAS 5
VII	6.3	239	180	122	0.68	188	1.04	PER 2
VII	7.2	199	175	122	0.70	188	1.07	ROM 2
VII	6.5	142	156	122	0.78	188	1.21	CHL 1
VII	6.5	77	134	122	0.91	188	1.40	WAS 6
VIII	7.8	68	288	190	0.66	288	1.00	CHL 2
VIII	7.9	72	275	190	0.69	288	1.05	WAS 1
VIII	7.9	72	162	190	1.17	288	1.78	WAS 2
VIII	7.8	68	160	190	1.19	288	1.80	CHL 3
VIII	7.9	94	67	190	2.84	288	4.30	WAS 3
VIII	7.9	94	66	190	2.88	288	4.36	WAS 4

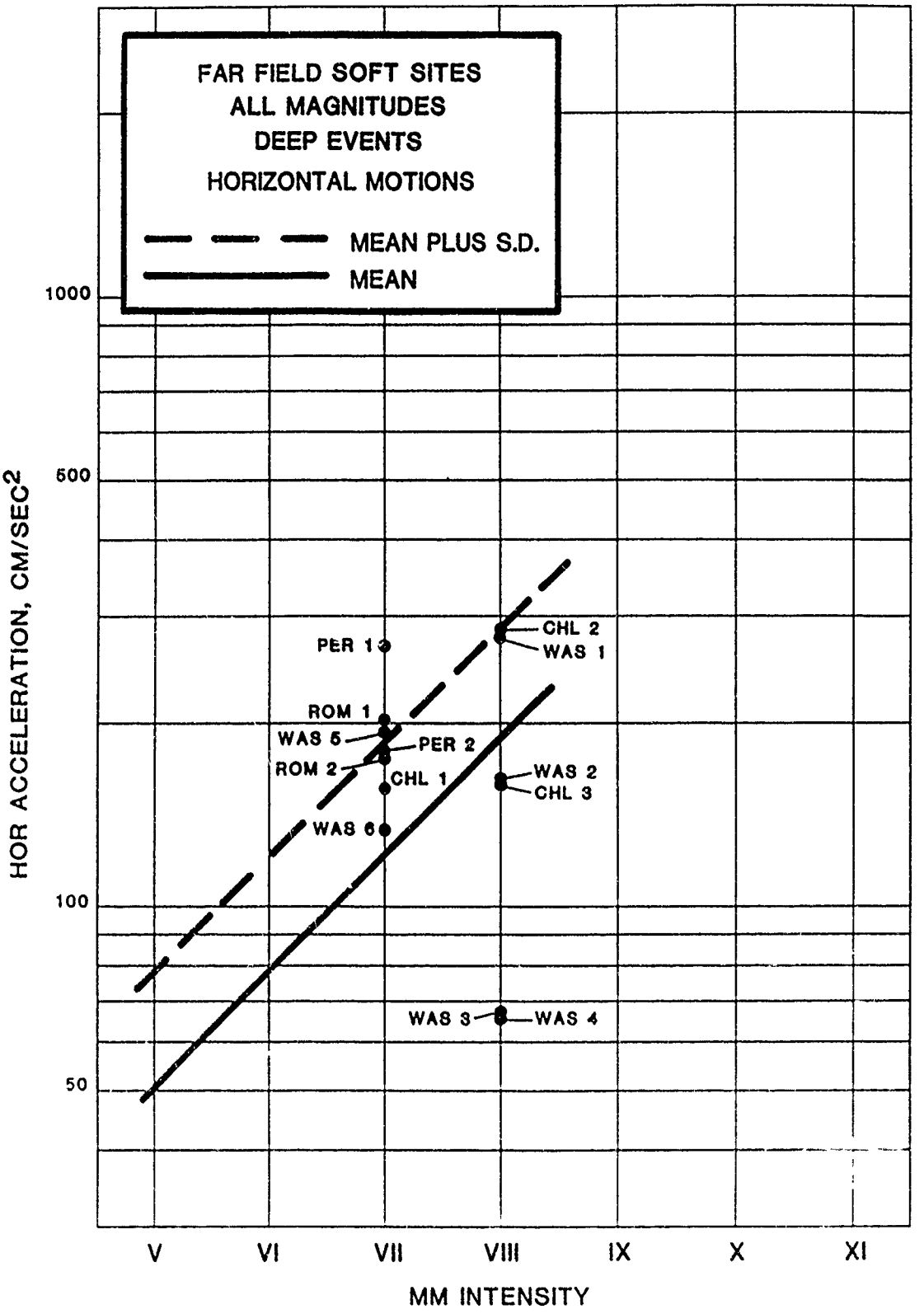


Figure 16. Accelerograms for acceleration and intensity at far-field, soft sites for deep earthquakes. (See Table 16.)

58. Generic accelerograms for deep event, far-field ground motion at soft sites with intensity and velocity as the parameters follow.

Table 17

Deep-Int-Soft-Vel

Int	Mag	Hypo km	Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
VII	7.2	199	75.1	13.0	0.17	20.2	0.27	ROM 1
VII	7.2	199	32.6	13.0	0.40	20.2	0.62	ROM 2
VII	6.5	142	23.2	13.0	0.56	20.2	0.87	CHL 1
VII	6.3	239	21.6	13.0	0.60	20.2	0.94	PER 1
VII	6.3	239	13.2	13.0	0.98	20.2	1.53	PER 2
VII	6.5	77	12.7	13.0	1.02	20.2	1.59	WAS 5
VII	6.5	77	8.0	13.0	1.62	20.2	2.52	WAS 6
VIII	7.9	72	21.4	25.0	1.17	38.0	1.78	WAS 2
VIII	7.9	72	17.0	25.0	1.47	38.0	2.24	WAS 1
VIII	7.9	94	8.2	25.0	3.05	38.0	4.63	WAS 3
VIII	7.9	94	7.9	25.0	3.16	38.0	4.81	WAS 4

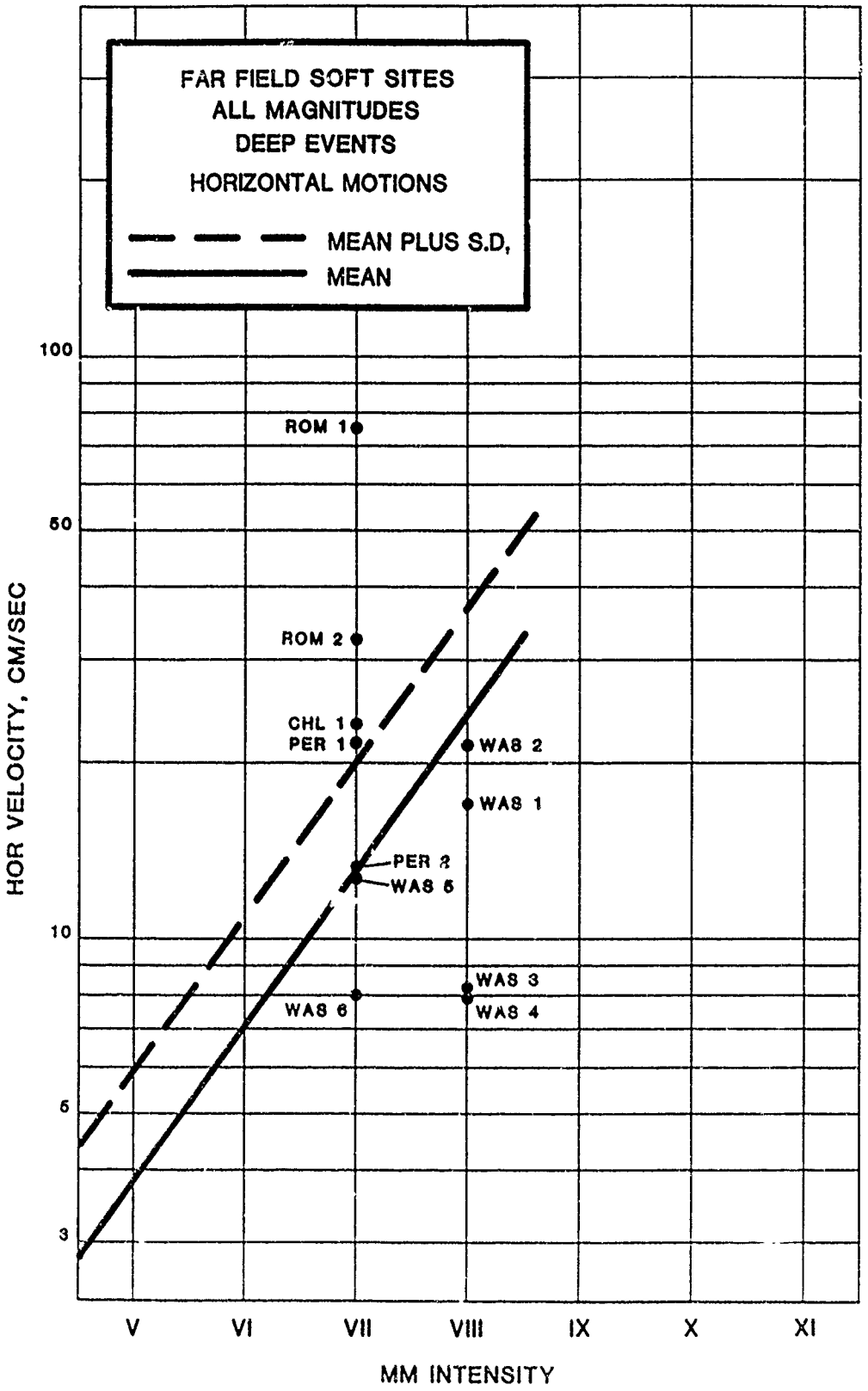


Figure 17. Accelerograms for velocity and intensity at far-field, soft sites for deep earthquakes. (See Table 17.)

59. Generic accelerograms for deep event, far-field ground motion at soft sites with intensity and duration as the parameters follow.

Table 18a

Deep-Int-Soft-Dur-Mag max 6.9

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VII	6.5	142	21.3	5.1	-16.2	11.0	-10.1	CHL 1
VII	6.3	239	16.0	5.1	-10.9	11.0	-5.0	PER 1
VII	6.5	77	14.0	5.1	-8.9	11.0	-3.0	WAS 5
VII	6.5	77	12.4	5.1	-7.3	11.0	-1.4	WAS 6
VII	6.3	236	12.0	5.1	-6.9	11.0	-1.0	PER 2

Table 18b

Deep-Int-Soft-Dur-Mag max 7.5

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VII	7.2	199	11.9	18.0	+6.1	37.0	+25.1	ROM 2
VII	7.2	199	9.3	18.0	+8.7	37.0	+27.7	ROM 1

Table 18c

Deep-Int-Soft-Dur-Mag min 7.6

Int	Mag	Hypo km	Dur sec	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
VIII	7.8	68	58.2	54.0	-4.2	112.0	+53.8	CHL 2
VIII	7.8	68	58.2	54.0	-4.2	112.0	+53.8	CHL 3
VIII	7.9	72	22.0	54.0	+32.0	112.0	+90.0	WAS 2
VIII	7.9	72	21.5	54.0	+32.5	112.0	+90.5	WAS 1
VIII	7.9	94	16.0	54.0	+38.0	112.0	+96.0	WAS 3
VIII	7.9	94	13.0	54.0	+41.0	112.0	+99.0	WAS 4

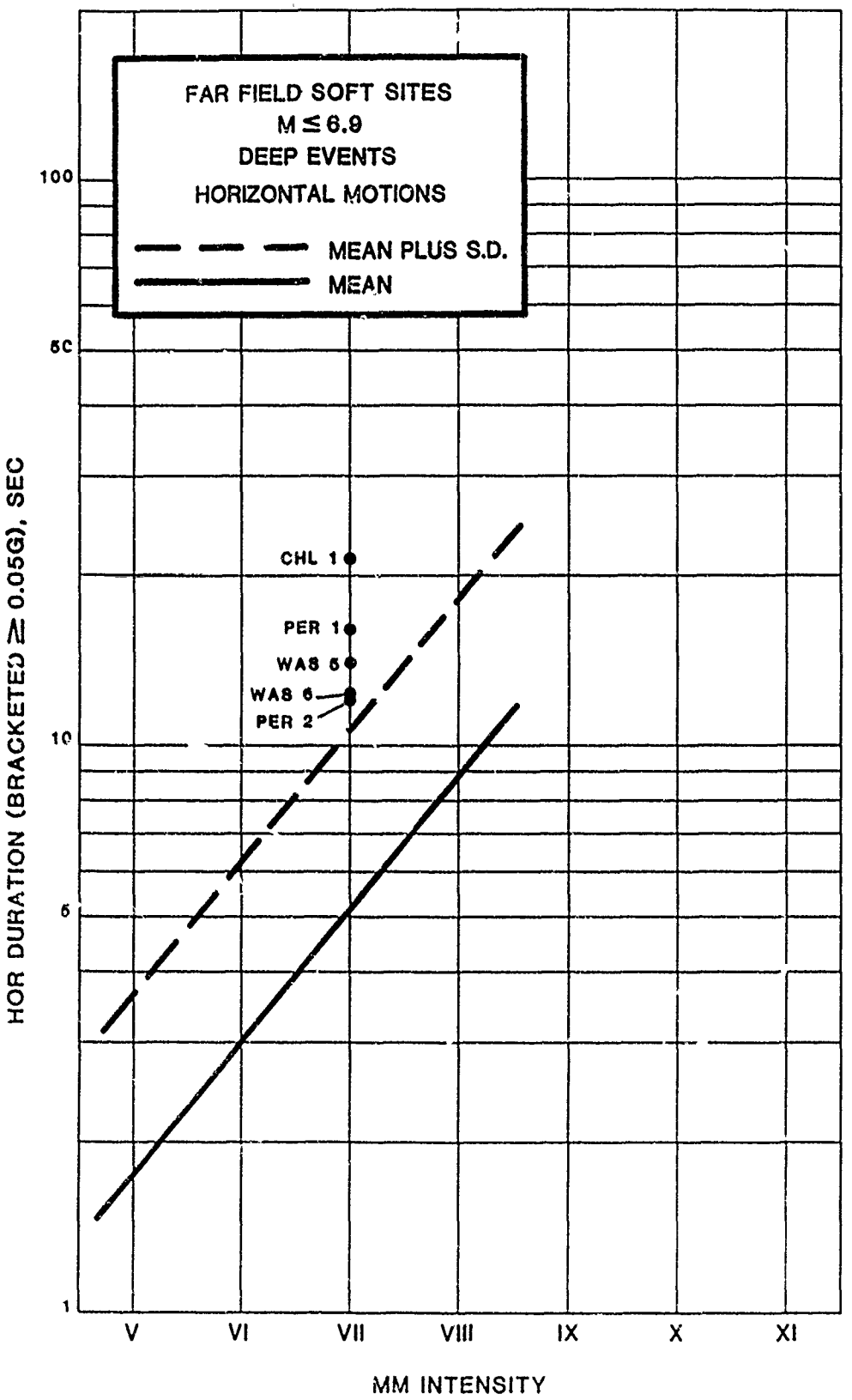


Figure 18a. Accelerograms for duration and intensity at far-field, soft sites for deep earthquakes, M ≤ 6.9. (See Table 18a.)

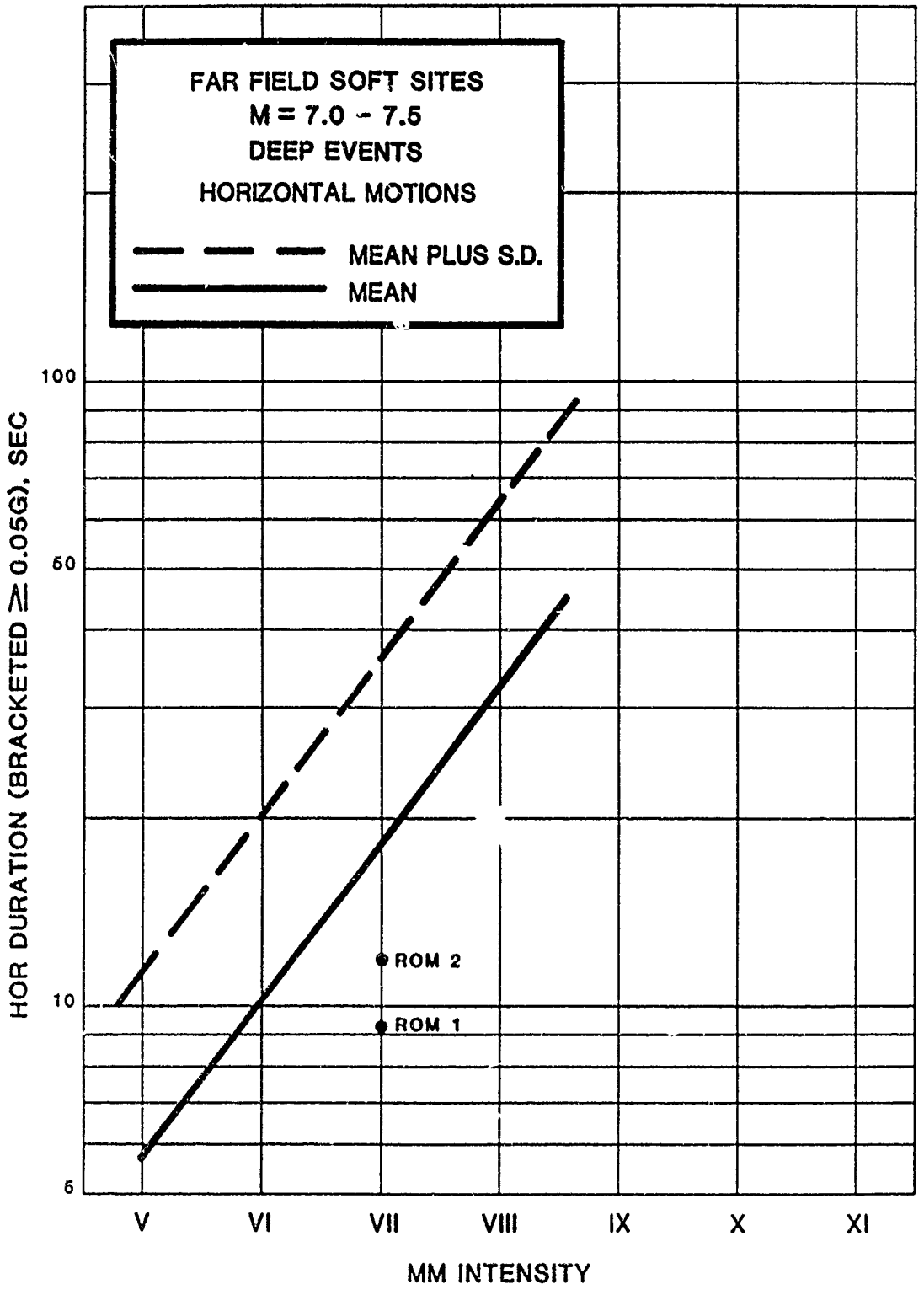


Figure 18b. Accelerograms for duration and intensity at far-field, soft sites for deep earthquakes, M = 7.0-7.5. (See Table 18b.)

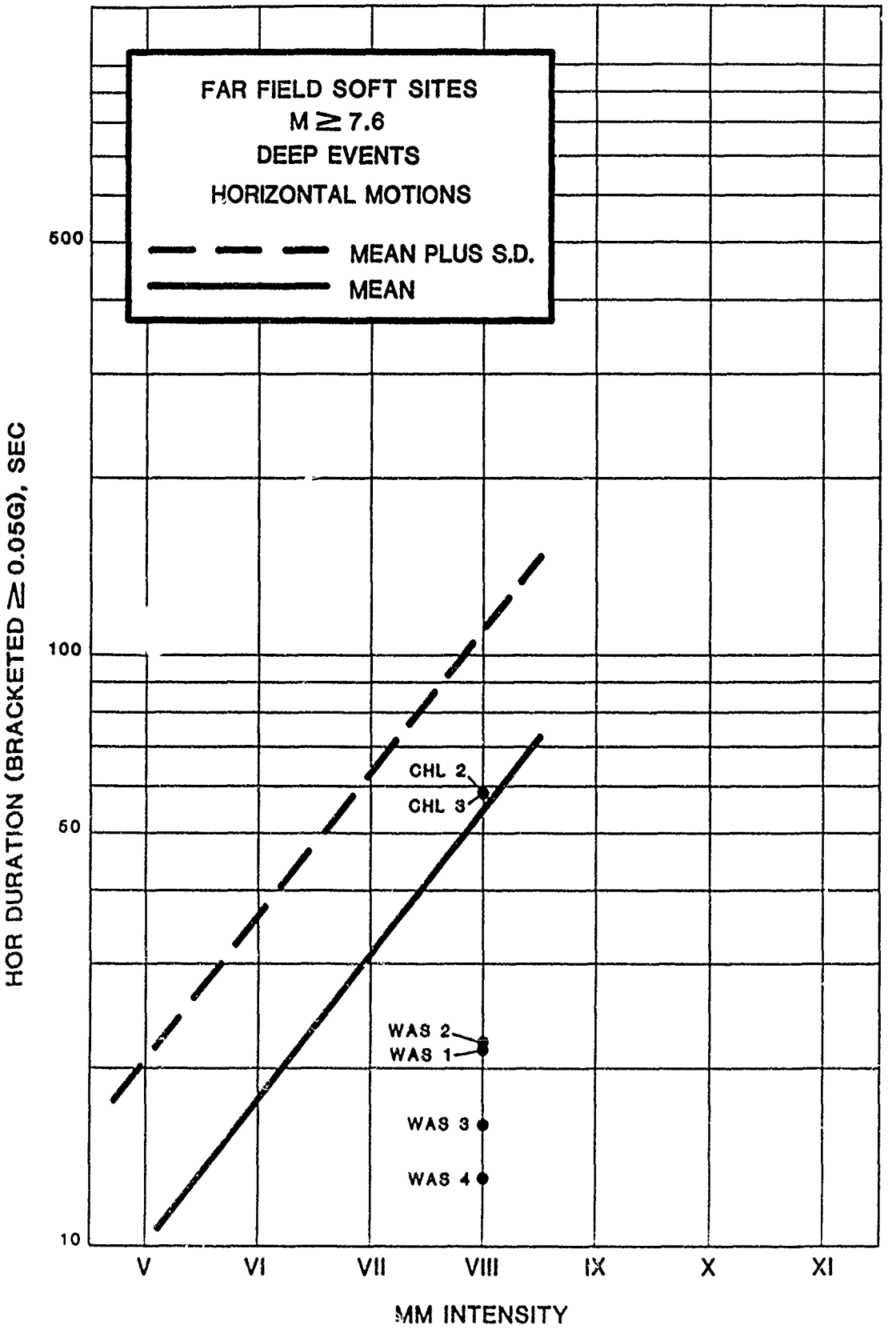


Figure 18c. Accelerograms for duration and intensity at far-field, soft sites for deep earthquakes, M ≥ 7.6. (See Table 18c.)

PART XI: TABLES AND FIGURES FOR MAGNITUDE-RELATED PEAK GROUND MOTION FOR SHALLOW EVENTS ON HARD SITES

60. Generic accelerogram selections with peak acceleration in gals as the parameter follow. An asterisk after an I.D. number indicates a rock site.

Table 19a

Shallow-Hard-Accel-Mag 5.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
9	231	180	0.78	320	1.39	CAN 2
10	245	170	0.69	315	1.29	CAL 99
10	214	170	0.79	315	1.47	SAL 12
14	193	150	0.78	260	1.35	CAL 214
15	194	135	0.70	250	1.29	CAL 21
15	257	135	0.53	250	0.97	ROC 8
21	171	94	0.55	180	1.05	CAL 279
22	156	90	0.58	175	1.12	CAL 64*

Table 19b

Shallow-Hard-Accel-Mag 6.0

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
10	245	270	1.10	505	2.06	CAL 99
10	214	270	1.26	505	2.36	SAL 12
13	224	225	1.00	400	1.79	CAN 15
14	315	205	0.65	390	1.24	CAL 101
17	177	180	1.00	325	1.84	CAL 165
21	171	130	0.76	270	1.58	CAL 279
32	173	86	0.49	165	0.95	ITA 27
39	167	72	0.43	135	0.81	CAL 47*
47	104	58	0.5	105	1.0	CAN 17*
95	122	23	0.2	41	0.3	CAN 23*

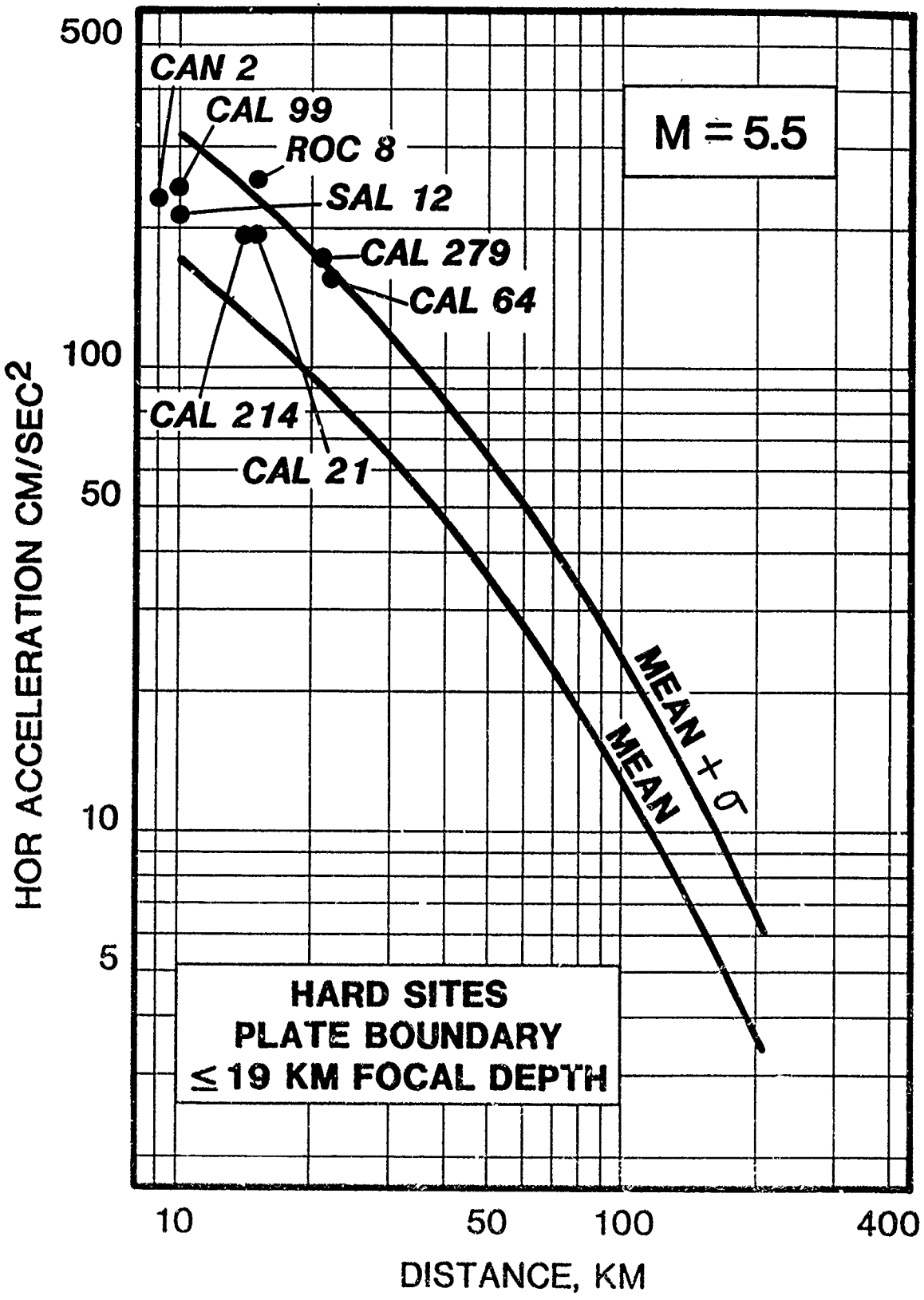


Figure 19a. Accelerograms for acceleration, M = 5.5, and distance from source for shallow earthquakes at hard sites. (See Table 19a.)

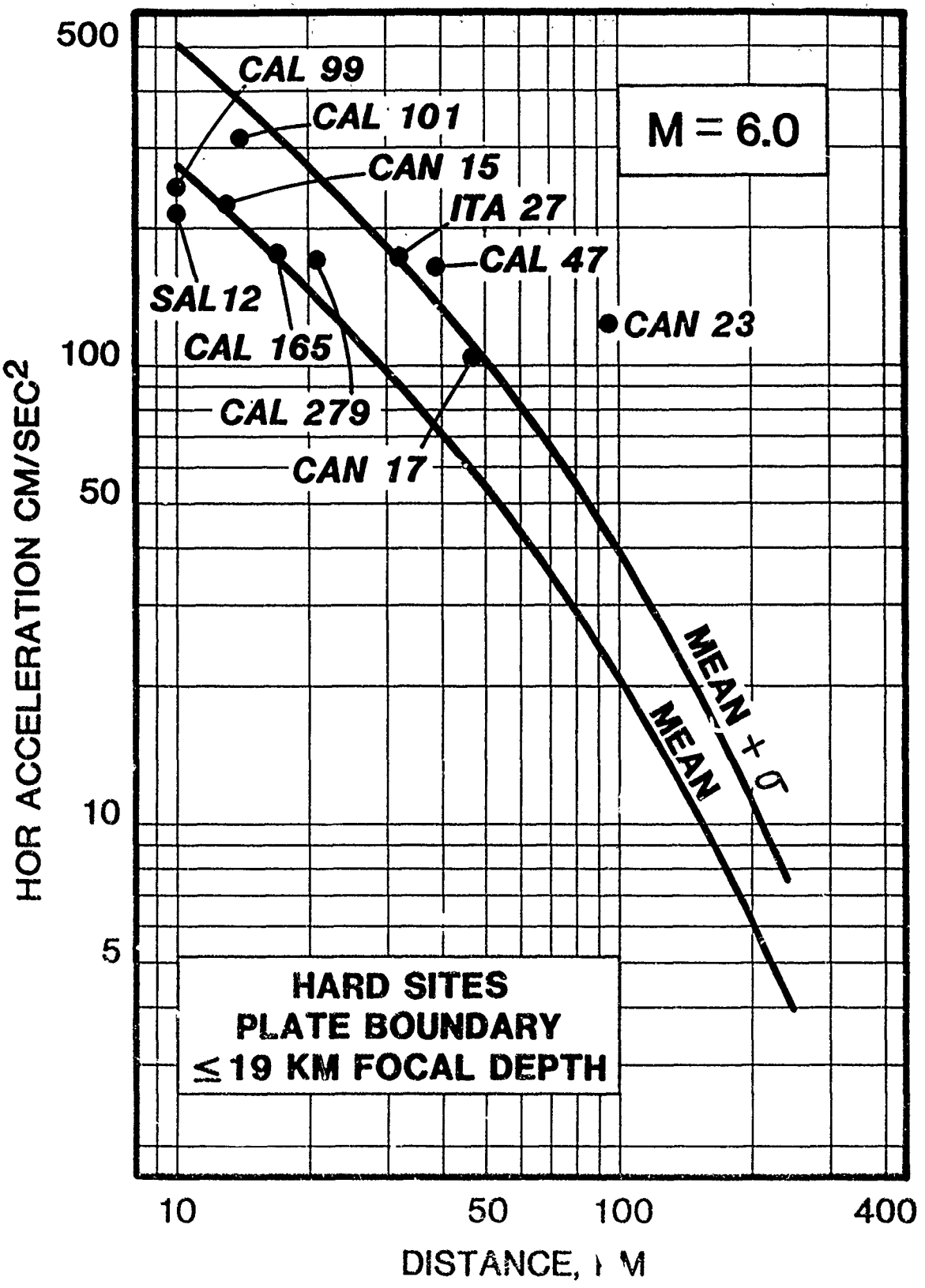


Figure 19b. Accelerograms for acceleration, M = 6.0, and distance from source for shallow earthquakes at hard sites. (See Table 19b.)

Table 19c

Shallow-Hard-Accel-Mag 6.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
9	392	415	1.06	800	2.04	CAL 157
9	330	415	1.26	800	2.42	CAN 11
17	223	260	1.17	500	2.24	CAL 168
18	283	240	0.85	460	1.63	CAL 225
24	299	345	1.15	350	1.17	ROC 2
33	168	136	0.81	240	1.43	CAL 43*
33	130	136	1.02	240	1.85	ITA 22
39	173	110	0.64	205	1.18	CAL 192
39	167	108	0.65	205	1.23	CAL 47*
47	104	89	0.85	150	1.4	CAN 17*
67	153	52	0.35	100	2.0	CAN 18*
95	122	31	0.25	59	1.9	CAN 23*
116	119	26	0.2	48	0.4	CAN 24*

Table 19d

Shallow-Hard-Accel-Mag 7.0

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
9	392	650	1.66	1250	3.19	CAL 157
9	534	650	1.22	1250	2.34	CAN 12
17	223	405	1.82	710	1.78	CAL 168
18	402	390	0.97	710	1.77	CAL 396*
20	282	335	1.19	650	2.30	CAL 334
23	433	310	0.72	565	1.30	CAL 354*
24	342	300	0.88	560	1.64	CAL 330
24	299	300	1.00	515	1.72	ROC 2
30	206	230	1.12	425	2.06	CAL 381
32	309	210	0.68	400	1.29	CAL 25*
33	168	205	1.22	375	2.23	CAL 43*
33	187	205	1.10	375	2.01	ITA 23
34	189	200	1.06	365	1.93	CAL 38*
39	173	165	0.95	315	1.82	CAL 192
45	166	140	0.84	255	1.54	CAL 51*
61	110	98	0.89	190	1.73	CAL 362*
66	98	86	0.88	170	1.73	CAL 365*
69	124	82	0.66	160	1.29	CAL 348*

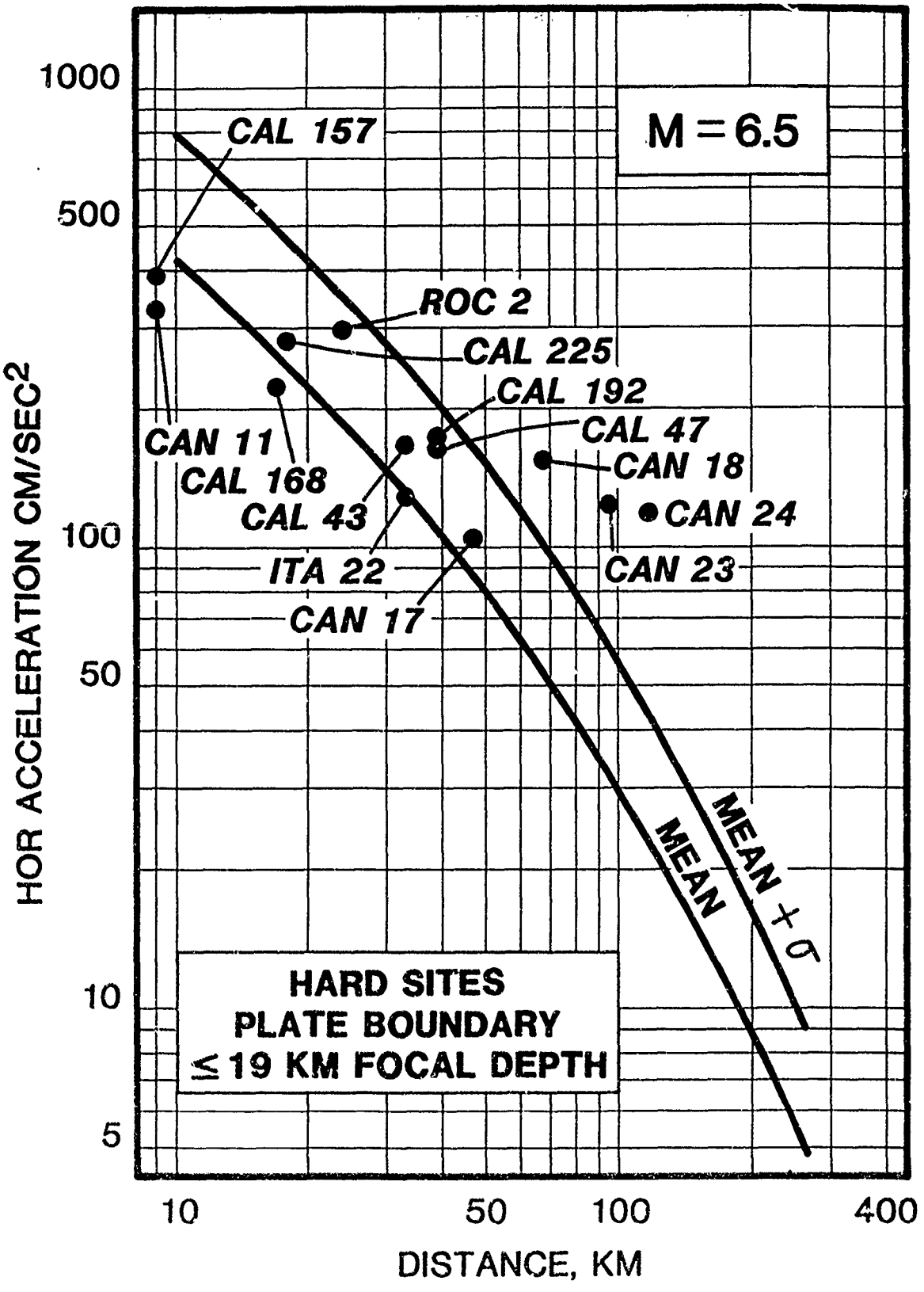


Figure 19c. Accelerograms for acceleration, M = 6.5, and distance from source for shallow earthquakes at hard sites. (See Table 19c.)

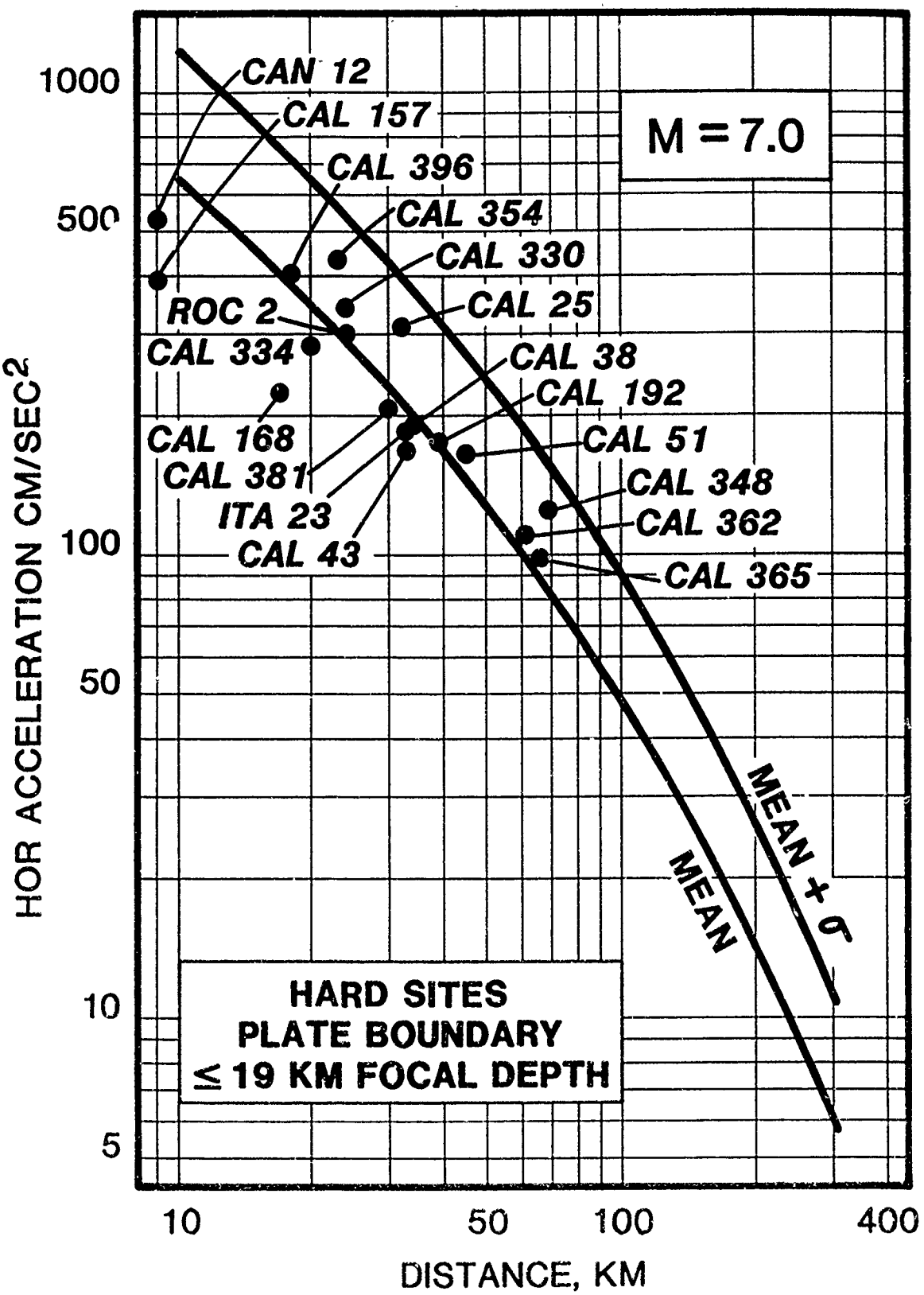


Figure 19d. Accelerograms for acceleration, M = 7.0, and distance from source for shallow earthquakes at hard sites. (See Table 19d.)

Table 19e

Shallow-Hard-Accel-Mag 7.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
9	392	1000	2.5	1500	3.82	CAL 157
10	1080	1000	0.93	1500	1.39	CAN 9
18	434	620	1.43	1300	3.00	CAL 395*
20	434	585	1.35	1100	2.53	CAL 372*
23	433	490	1.13	920	2.12	CAL 354
30	314	370	1.18	700	2.23	CAL 382
32	309	350	1.13	610	1.97	CAL 25*
33	187	350	1.87	600	3.21	ITA 23
39	177	285	1.61	505	2.85	CAL 46*
41	222	250	1.13	490	2.21	ITA 20
42	256	250	0.98	485	1.89	CAL 190
58	189	160	0.85	305	1.61	CAL 139*
61	110	150	1.36	290	2.64	CAL 362*
66	98	140	1.43	275	2.31	CAL 365*
69	124	130	1.05	265	2.14	CAL 348*

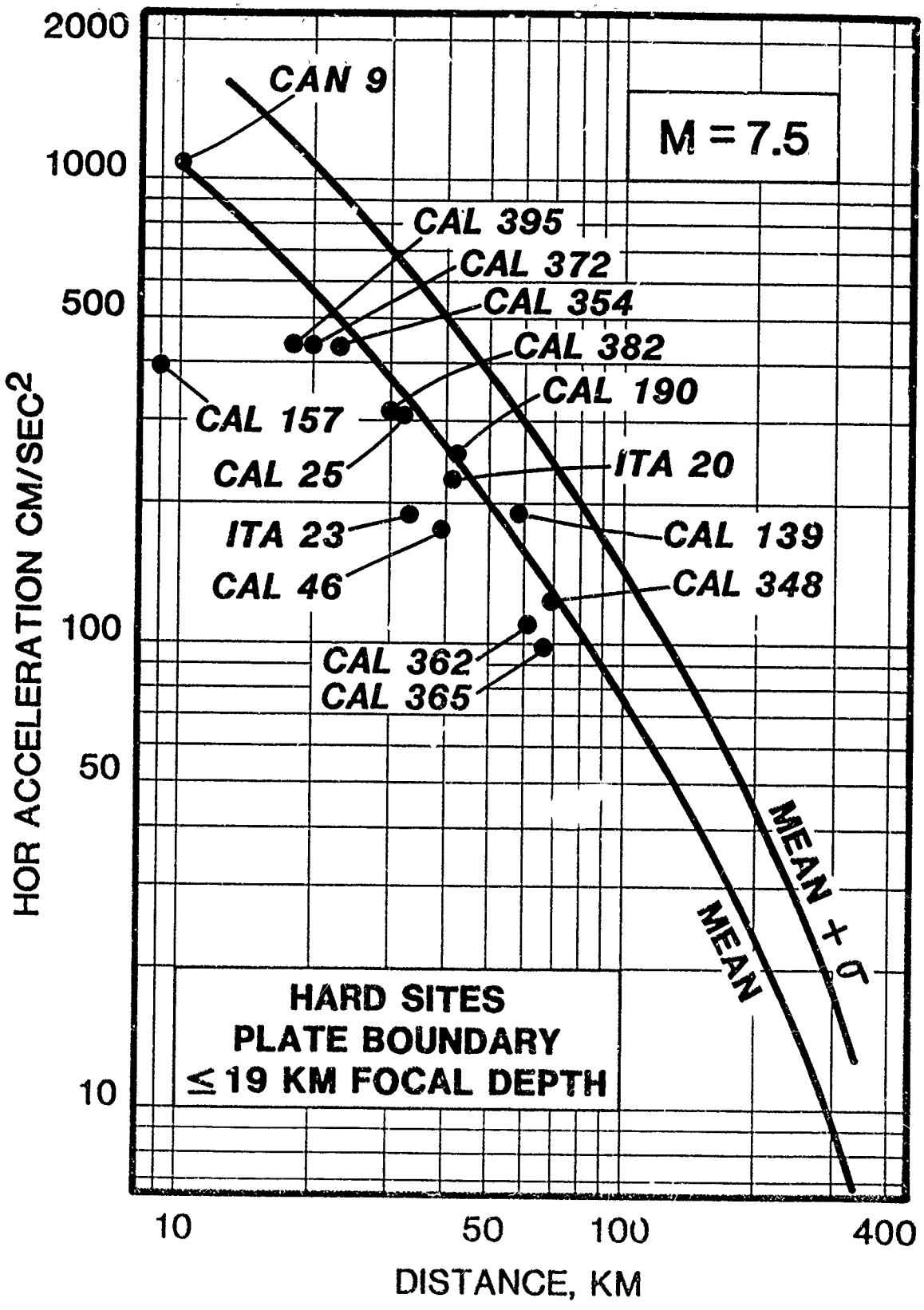


Figure 19e. Accelerograms for acceleration, M = 7.5, and distance from source for shallow earthquakes at hard sites. (See Table 19e.)

61. Generic accelerograms with peak velocity in cm/sec as the parameter follow. An asterisk after an I.D. number indicates a rock site.

Table 20a

Shallow-Hard-Vel-Mag 5.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
10	17.7	9.7	0.55	16.2	0.92	SAL 12
14	9.5	7.8	0.82	12.5	1.32	CAL 203
15	9.6	6.2	0.65	11.0	1.15	CAL 21
15	5.5	6.0	1.09	11.0	2.00	ROC 8
21	4.1	4.4	1.07	7.1	1.73	CAL 279
22	5.8	3.9	0.67	6.9	1.19	CAL 64*

Table 20b

Shallow-Hard-Vel-Mag 6.0

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
10	20.5	17.0	0.83	29.0	1.41	CAL 99
10	17.7	17.0	0.96	29.0	1.64	SAL 12
13	6.8	14.2	2.09	23.0	3.38	CAN 15
14	25.1	14.0	0.56	22.0	0.88	CAL 101
17	13.6	10.0	0.74	16.0	1.18	CAL 165
21	4.1	8.0	1.95	13.6	3.31	CAL 279
40	6.6	3.6	0.55	6.1	0.92	CAL 216
47	1.5	1.6	0.0	5.0	3.3	CAN 17*
67	1.8	1.0	0.6	3.2	1.8	CAN 18*
95	4.6	1.0	0.22	1.8	0.4	CAN 23*
116	2.7	0.7	0.25	7.3	0.5	CAN 24*

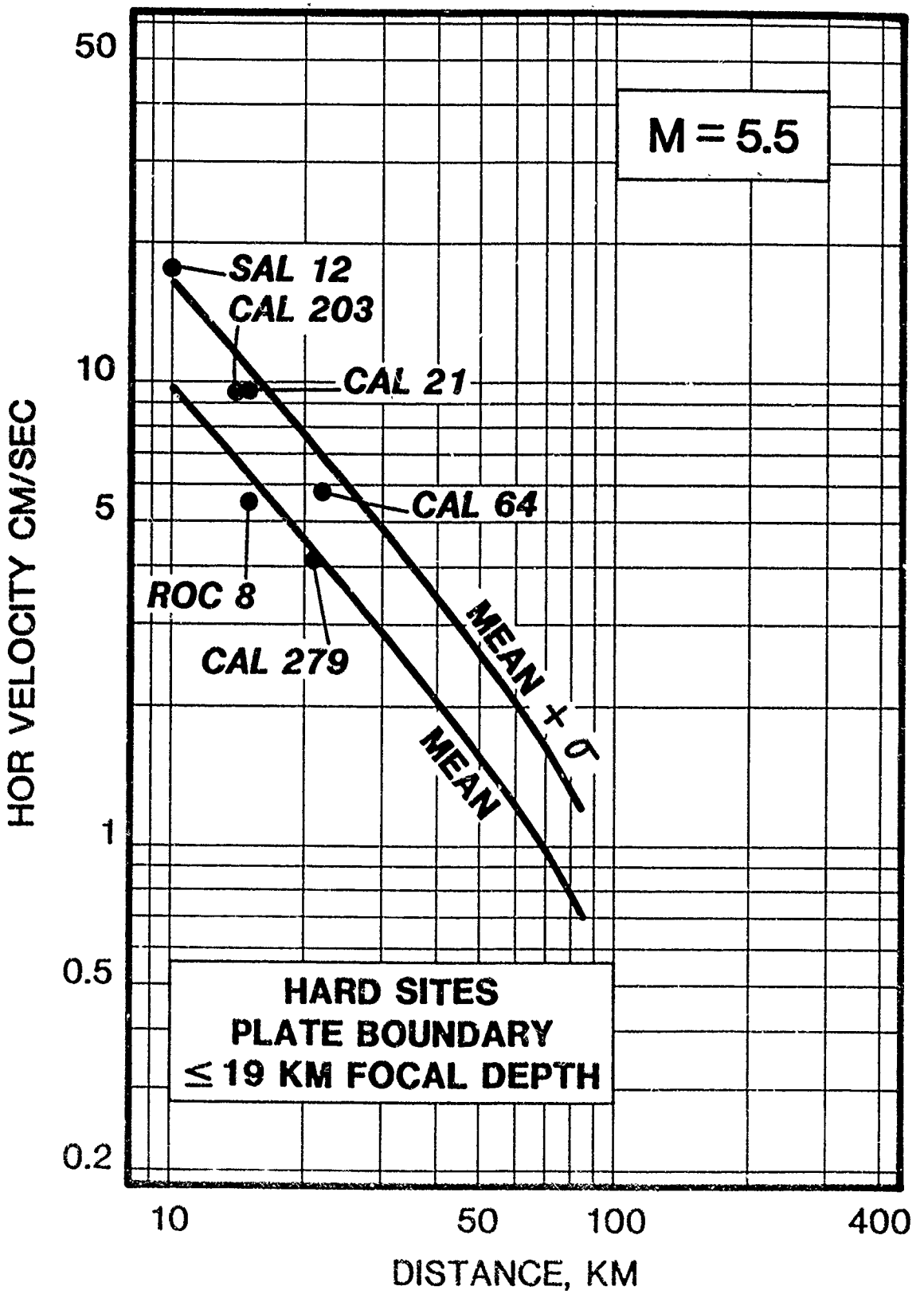


Figure 20a. Accelerograms for velocity, M = 5.5, and distance from source for shallow earthquakes at hard sites. (See Table 20a.)

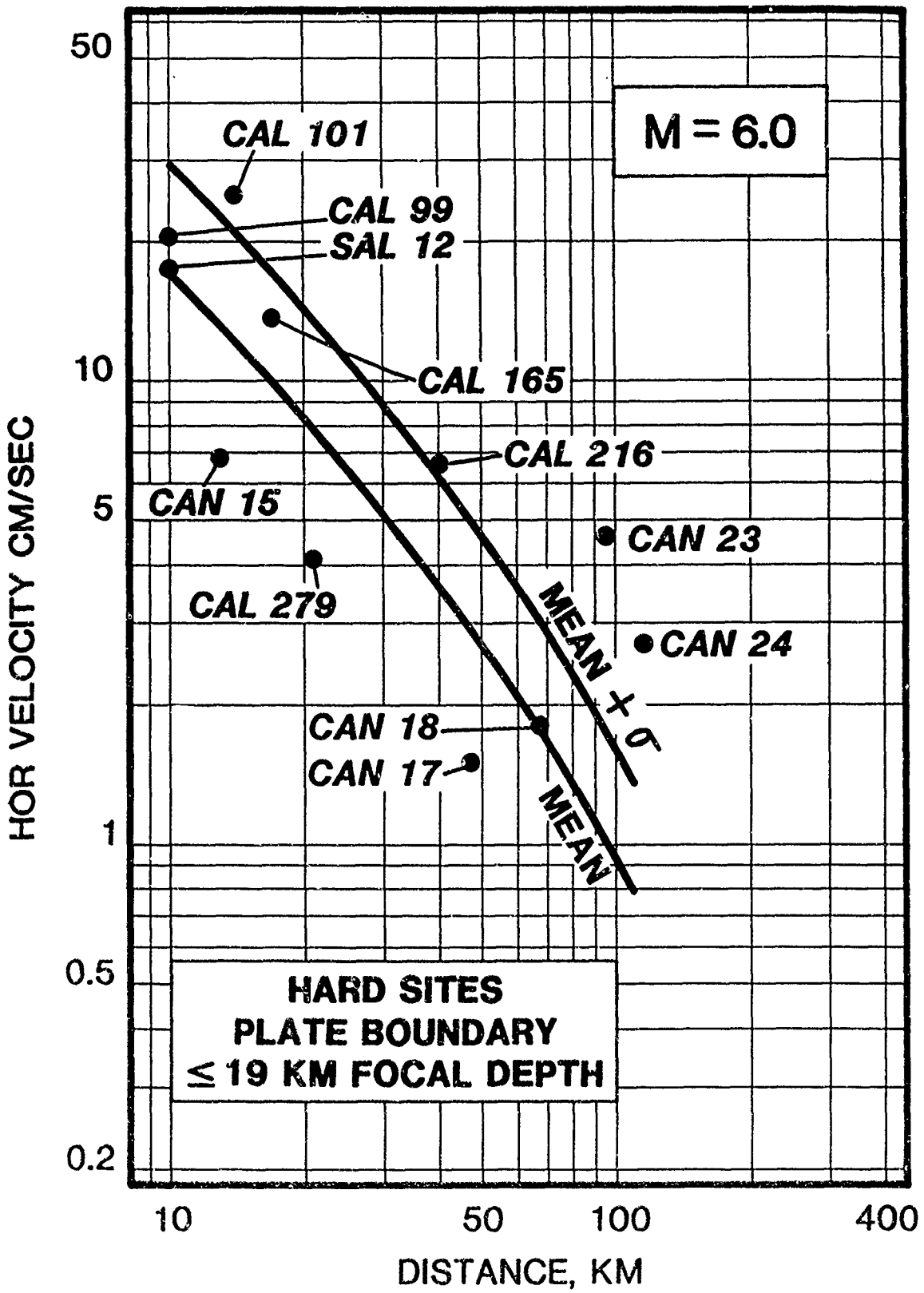


Figure 20b. Accelerograms for velocity, M = 6.0, and distance from source for shallow earthquakes at hard sites. (See Table 20b.)

Table 20c

Shallow-Hard-Vel-Mag 6.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
9	22 4	31.0	1.38	51.5	2.30	CAL 158
9	32.6	31.0	0.95	51.5	1.58	CAN 11
17	18.2	18.0	0.99	27.5	1.51	CAL 168
21	17.7	14.0	0.79	22.0	1.24	CAL 171
24	11.5	12.5	1.09	20.0	1.74	ROC [illegible]
33	5.3	8.2	1.55	13.2	2.49	CAL 43*
40	6.6	6.4	0.97	10.9	1.65	CAL 216
67	1.8	3.3	1.8	5.5	3.1	CAN 18*
95	4.6	1.8	0.39	3.3	0.7	CAN 23*
115	2.7	1.7	0.63	2.7	0.0	CAN 24*

Table 20d

Shallow-Hard-Vel-Mag 7.0

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
9	23.1	51.0	2.21	91.0	3.94	CAL 157
9	30.3	51.0	1.68	91.0	3.00	CAN 12
17	18.2	30.0	1.65	50.0	2 75	CAL 168
18	84.4	28.0	0.33	48.0	0.57	CAL 395*
20	28.4	26.0	0.92	41.5	1.4[illegible]	CA[illegible] 334
23	21.2	21.5	1.01	33.5	1 58	CAL 354
30	16.3	16.3	1.00	26.0	1.60	CAL 382
32	16.5	14.5	0.88	24.0	1.52	CAL 25*
37	11.8	12.4	1.05	21.0	1.78	CAL 38*
57	9.0	6.8	0.76	12.0	1.33	CAL 139*
61	14.3	6.7	0.47	12.5	0.87	CAL 362*

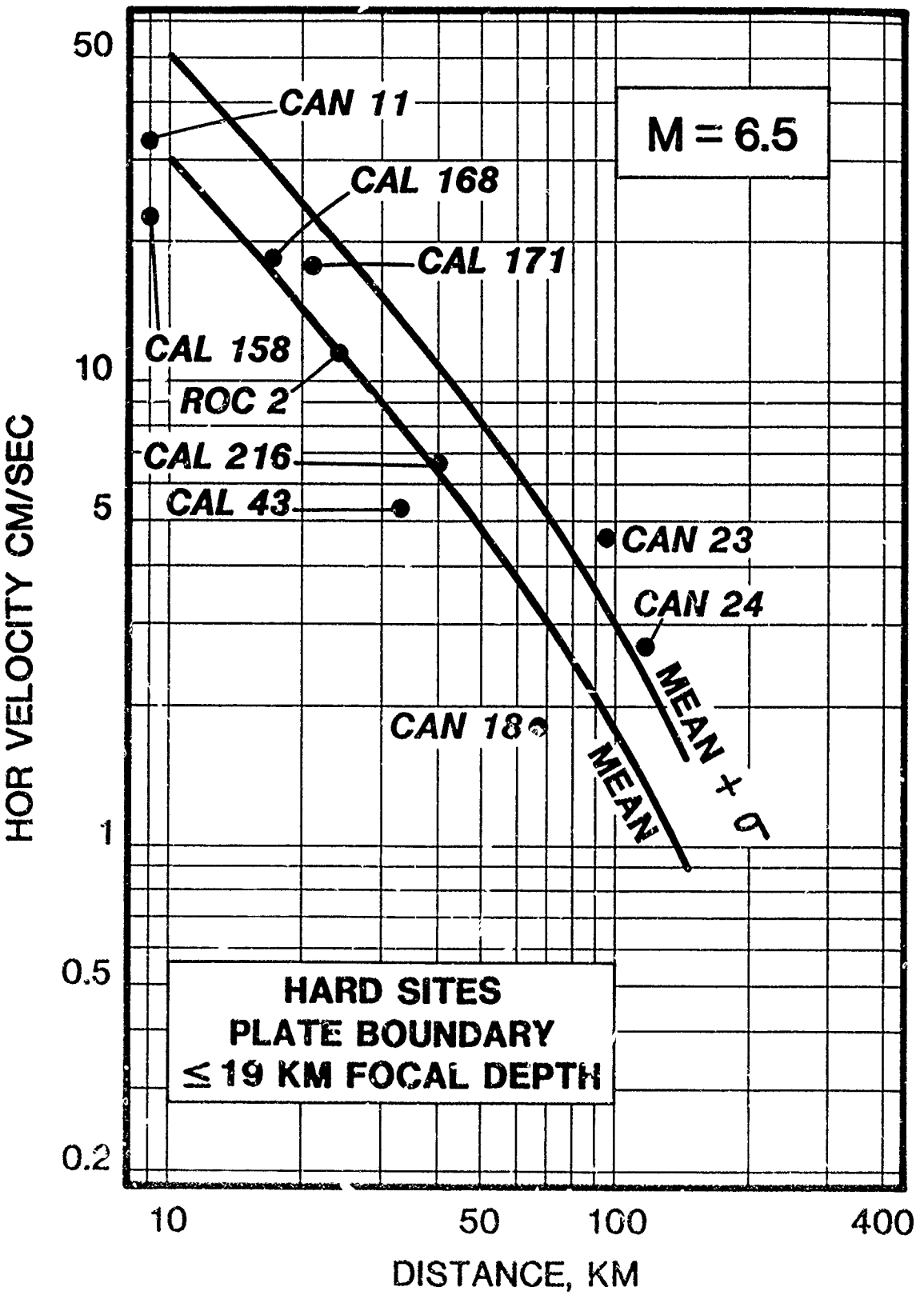


Figure 20c. Accelerograms for velocity, M = 6.5, and distance from source for shallow earthquakes at hard sites. (See Table 20c.)

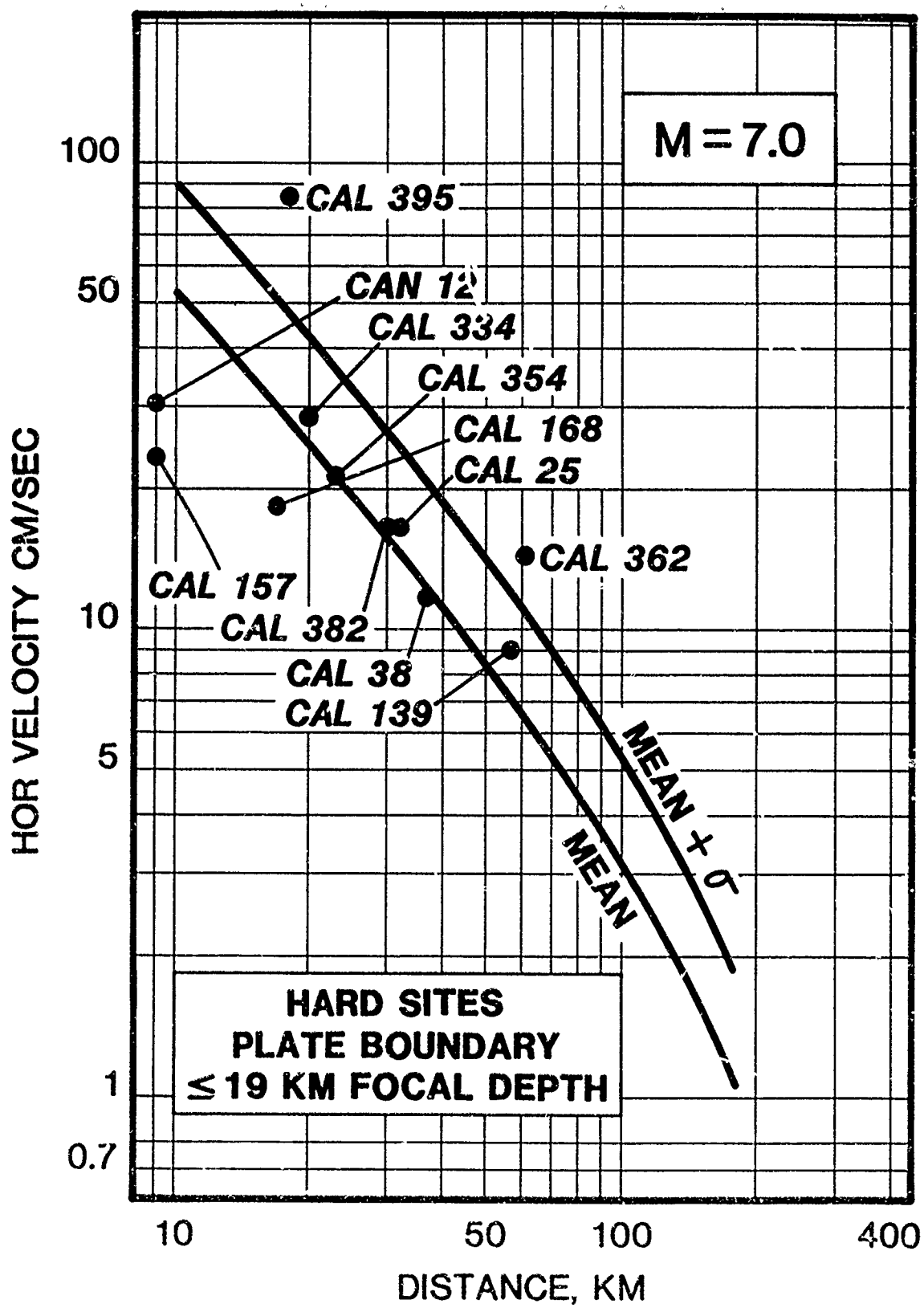


Figure 20d. Accelerograms for velocity, M = 7.0, and distance from source for shallow earthquakes at hard sites. (See Table 20d.)

Table 20e

Shallow-Hard-Vel-Mag 7.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
10	46.2	92.0	1.99	150.0	3.25	CAN 9
17	18.2	60.0	3.30	85.0	4.67	CAL 168
18	84.4	49.0	0.58	85.0	1.00	CAL 395*
20	33.8	44.0	1.30	73.0	2.16	CAL 372*
32	27.2	27.0	0.99	46.0	1.69	CAL 26*
33	23.4	25.5	1.09	40.0	1.71	ITA 22
39	18.3	20.0	1.09	35.0	1.91	CAL 192
41	28.3	18.5	0.65	31.0	1.10	CAL 189
41	42.4	18.5	0.44	31.0	0.73	ITA 20
58	9.0	12.5	1.39	21.0	2.33	CAL 139*
61	14.3	14.0	1.02	19.0	1.33	CAL 362*

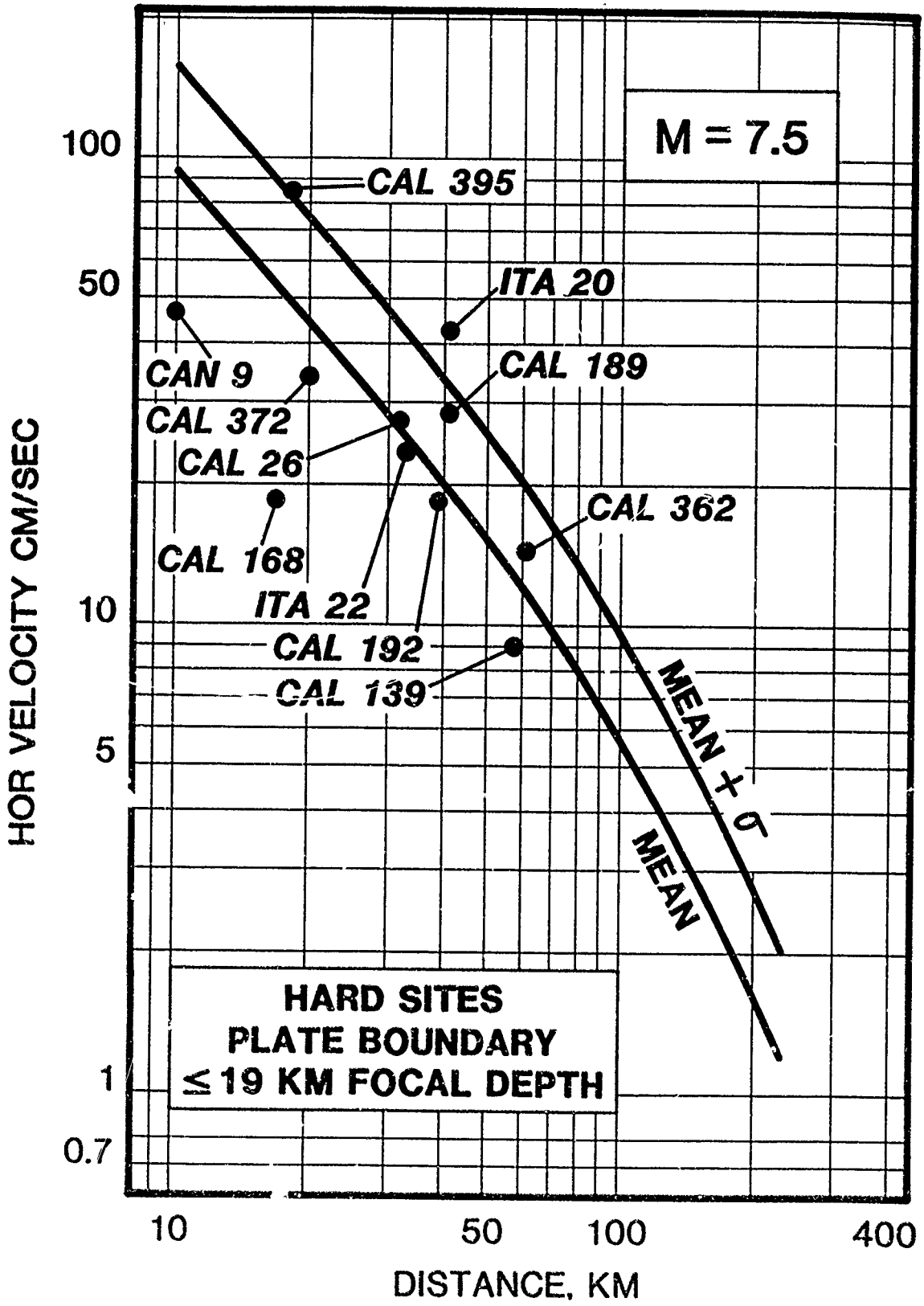


Figure 20e. Accelerograms for velocity, M = 7.5, and distance from source for shallow earthquakes at hard sites. (See Table 20e.)

62. Generic accelerograms with duration (bracketed 0.05 g or more) in seconds as the parameter follow. An asterisk after an I.D.number indicates a rock site.

Table 21a

Shallow-Hard-Dur-Mag 5.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
9	1.4	1.0	-0.4	1.5	+0.1	CAN 2
10	1.7	1.0	-0.7	1.6	+0.1	MON 1*
14	1.1	1.1	0.0	1.7	+0.6	CAL 203
15	2.3	1.2	-1.1	1.8	-0.5	CAL 21
15	1.7	1.2	-0.5	1.8	+0.1	ROC 8
22	3.0	1.3	-1.7	1.9	-1.1	CAL 64*
32	3.2	1.4	-1.8	2.1	-1.1	CAL 19

Table 21b

Shallow-Hard-Dur-Mag 6.0

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
10	1.7	1.6	-0.1	2.5	+0.8	MON 1*
13	4.6	1.7	-2.9	2.6	-2.0	CAN 15
14	1.1	1.8	+0.7	2.7	+1.6	CAL 203
15	2.3	1.9	-0.4	2.8	+0.5	CAL 21
22	3.0	2.2	-0.8	3.1	+0.1	CAL 64*
32	3.2	2.4	-0.8	3.5	+0.3	CAL 19
67	7.0	3.0	-4.0	5.0	-2.0	CAN 18*
95	6.1	3.2	-2.9	5.3	+0.8	CAN 23*
116	3.4	3.4	0.0	6.0	+2.6	CAN 24*

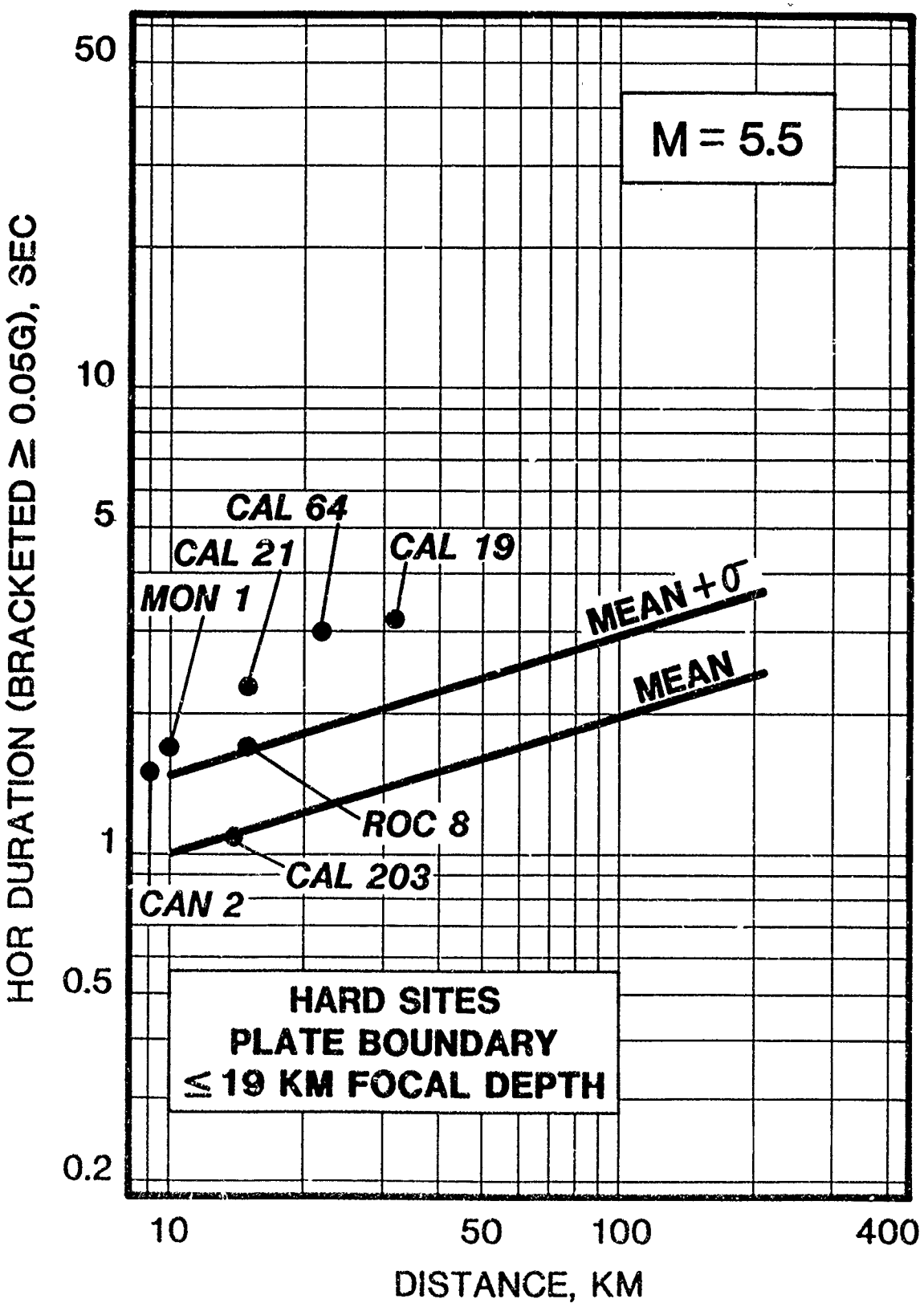


Figure 21a. Accelerograms for duration, M = 5.5, and distance from source for shallow earthquakes at hard sites. (See Table 21a.)

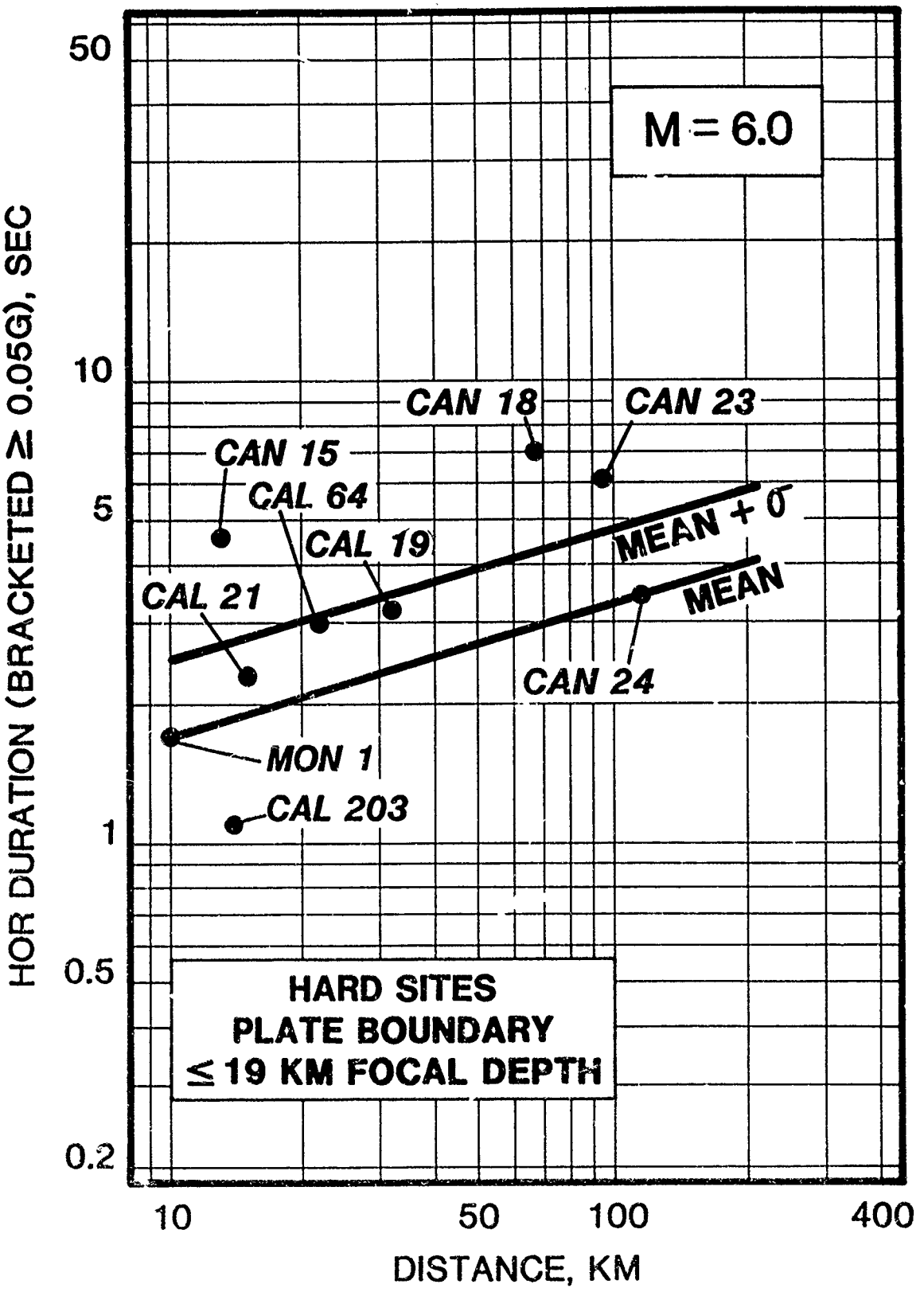


Figure 21b. Accelerograms for duration, M = 6.0, and distance for shallow earthquakes at hard sites. (See Table 21b.)

Table 21c

Shallow-Hard-Dur-Mag 6.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
10	1.7	2.7	+1.0	4.0	+2.3	MON 1*
15	2.3	3.0	+0.7	4.5	+2.2	CAL 21
17	4.2	3.2	-1.0	4.6	-0.4	CAL 166
21	5.0	3.4	-1.6	5.0	0.0	CAL 171
22	3.0	3.5	+0.5	5.1	+2.1	CAL 64*
33	6.5	4.0	-2.5	5.8	-0.7	CAL 43*
39	6.0	4.1	-1.9	6.0	0.0	CAL 49
58	4.9	4.8	-0.1	7.0	+2.1	CAL 139*
67	7.0	4.9	-2.1	7.1	+0.1	CAN 18*
95	6.1	5.3	-0.8	8.0	+1.9	CAN 23*
116	3.4	5.8	+2.4	8.6	+5.2	CAN 24*

Table 21d

Shallow-Hard-Dur-Mag 7.0

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
17	5.8	5.2	-0.6	6.8	+1.0	CAL 168
18	7.2	5.4	-1.8	7.9	+0.7	CAL 395*
20	9.5	5.6	-3.9	8.1	-1.4	CAL 372*
33	6.5	6.6	+0.1	9.6	+3.1	CAL 43*
33	10.5	6.6	-3.9	9.6	-0.9	ITA 23
37	6.5	6.7	+0.2	9.9	+3.4	CAL 38*
42	12.2	7.0	-5.2	10.0	-2.2	CAL 190
58	4.9	7.7	+2.8	11.5	+6.6	CAL 139*
61	6.0	7.9	+1.9	12.0	+6.0	CAL 362*

Table 21e

Shallow-Hard-Dur-Mag 7.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
10	11.7	7.8	-3.9	11.0	-0.7	CAN 9
17	6.2	8.9	+2.7	13.0	+6.8	CAL 167
18	7.2	9.0	+1.8	14.0	+6.8	CAL 395*
20	9.5	9.3	-0.2	15.0	+5.5	CAL 372*
24	15.9	10.0	-5.9	15.5	-0.4	CAL 330
30	13.0	11.0	-2.0	16.0	+3.0	CAL 381
33	6.5	11.0	+4.5	16.0	+9.5	CAL 43*
33	10.5	11.0	+0.5	16.0	+5.5	ITA 23
42	15.8	12.0	-3.8	17.5	+1.7	CAL 189

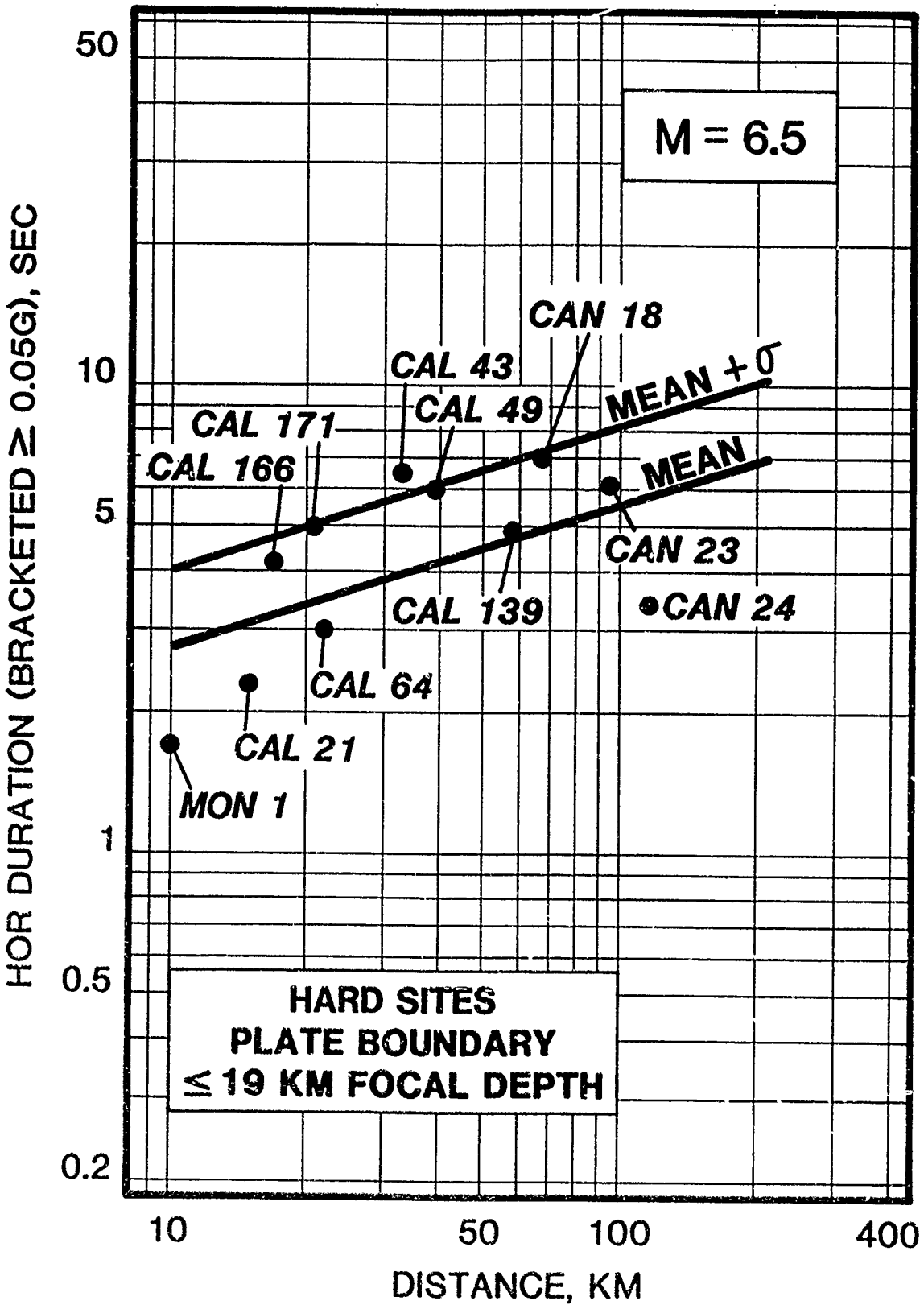


Figure 21c. Accelerograms for duration, M = 6.5, and distance from source for shallow earthquakes at hard sites (See Table 21c.)

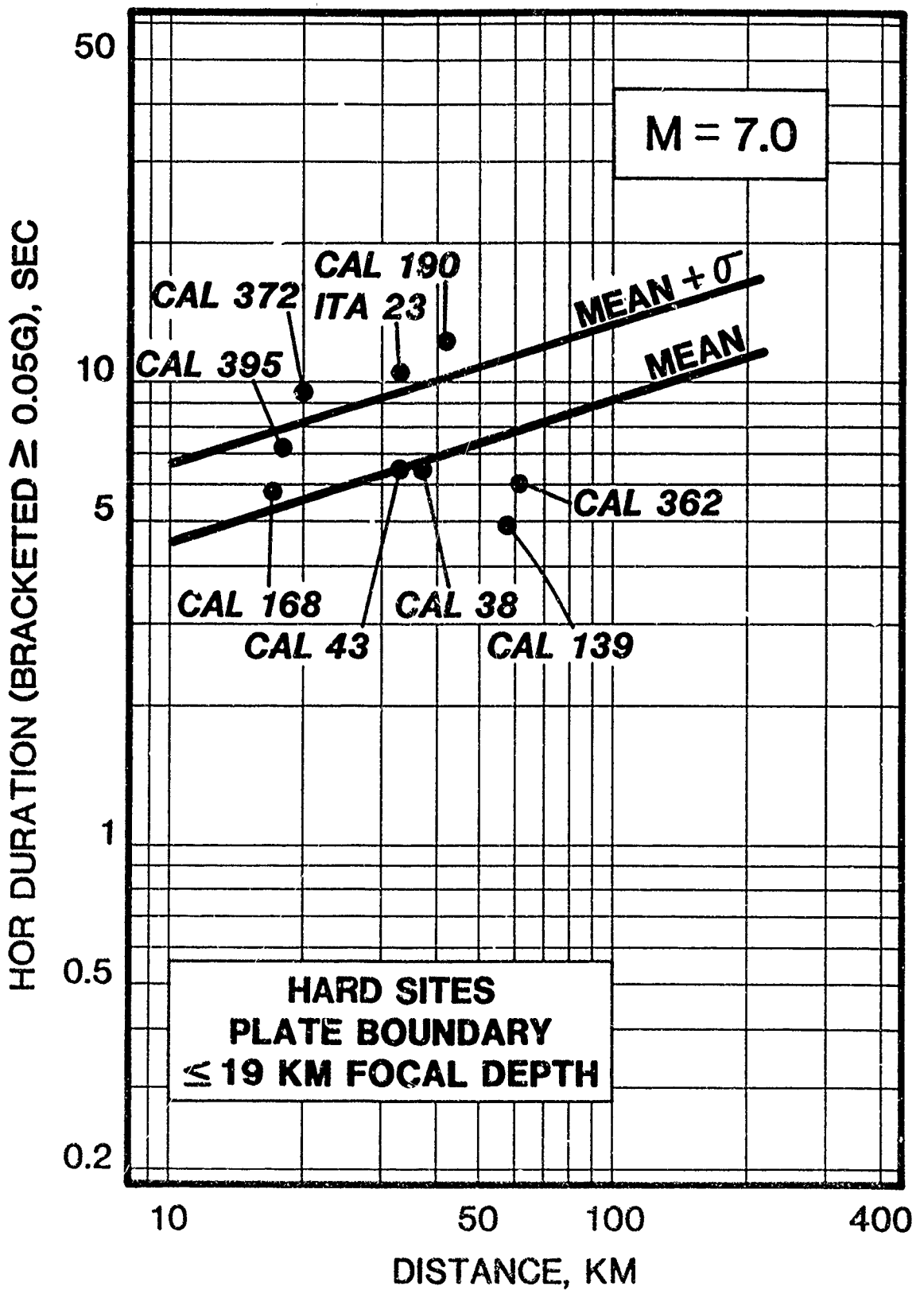


Figure 21d. Accelerograms for duration, M = 7.0, and distance from source for shallow earthquakes at hard sites. (See Table 21d.)

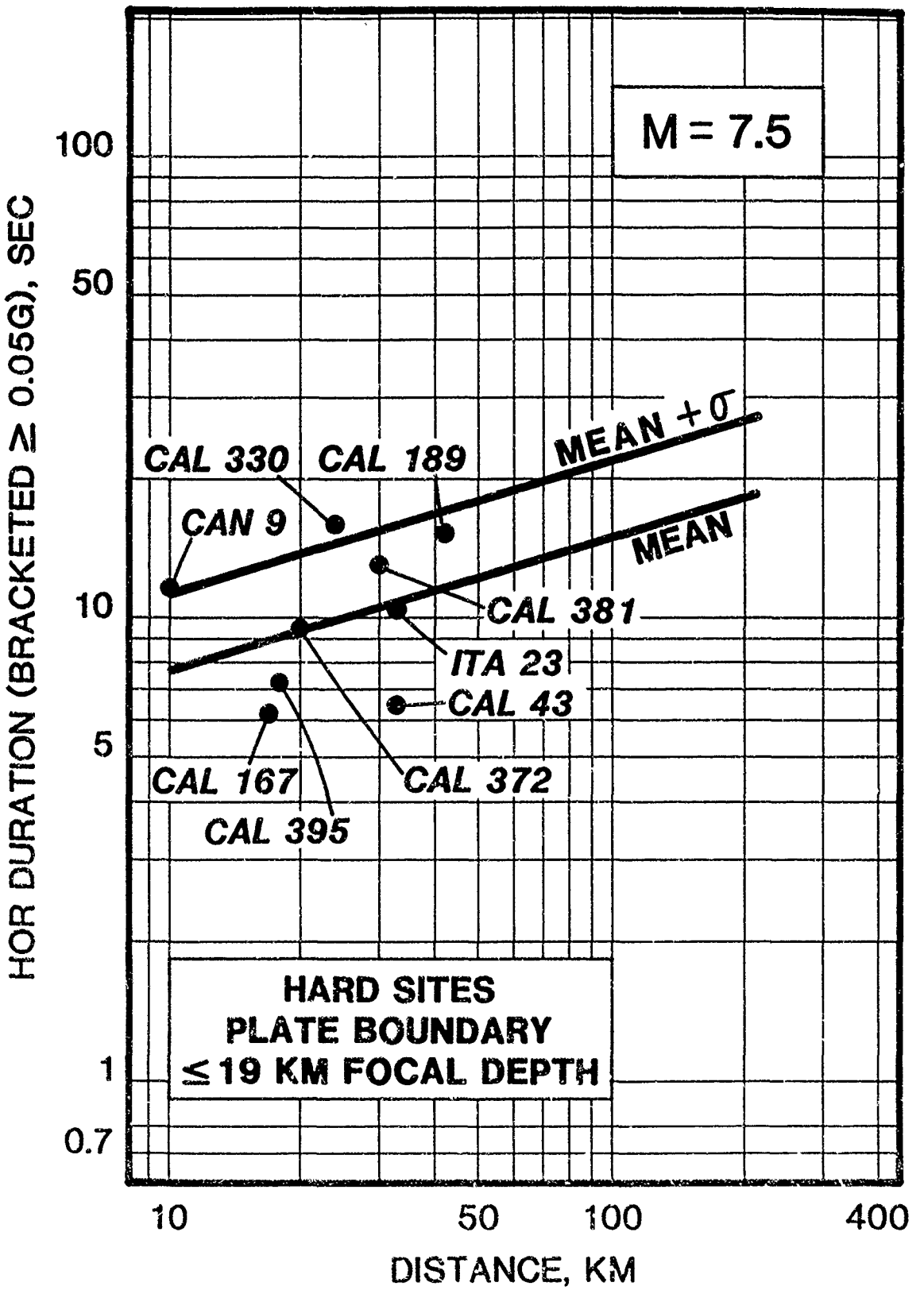


Figure 21e. Accelerograms for duration, M = 7.5, and distance from source for shallow earthquakes at hard sites. (See Table 21e.)

PART XII: TABLES AND FIGURES FOR MAGNITUDE-RELATED PEAK GROUND MOTION FOR SHALLOW EVENTS ON SOFT SITES

63. Generic accelerograms with peak acceleration in gals as the parameter follow.

Table 22a

Shallow-Soft-Accel-Mag 5.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
8	234	175	0.75	335	1.43	GRE 8
10	207	170	0.82	310	1.50	NIC 1
11	159	165	1.03	300	1.89	CAL 173
12	184	155	0.84	285	1.55	CAL 247
17	187	122	0.65	200	1.07	CAL 107
28	169	69	0.41	90	0.53	CAL 12

Table 22b

Shallow-Soft-Accel-Mag 6.0

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
8	318	280	0.88	515	1.62	NIC 3
10	306	265	0.87	500	1.63	CAL 227
11	377	260	0.70	490	1.30	CAL 175
11	286	260	0.91	490	1.71	CAL 253
12	350	245	0.70	470	1.34	GRE 9
12	720	245	0.29	470	0.65	CAL 244
16	228	224	0.98	370	1.62	CAL 103
20	175	145	0.83	275	1.57	CAL 69
20	352	145	0.42	275	0.78	ROC 4
24	168	130	0.77	250	1.49	CAL 236
28	169	100	0.59	200	1.18	CAL 12
39	154	72	0.47	135	0.88	CAL 224
93	123	23	0.19	41	0.33	CAN 22

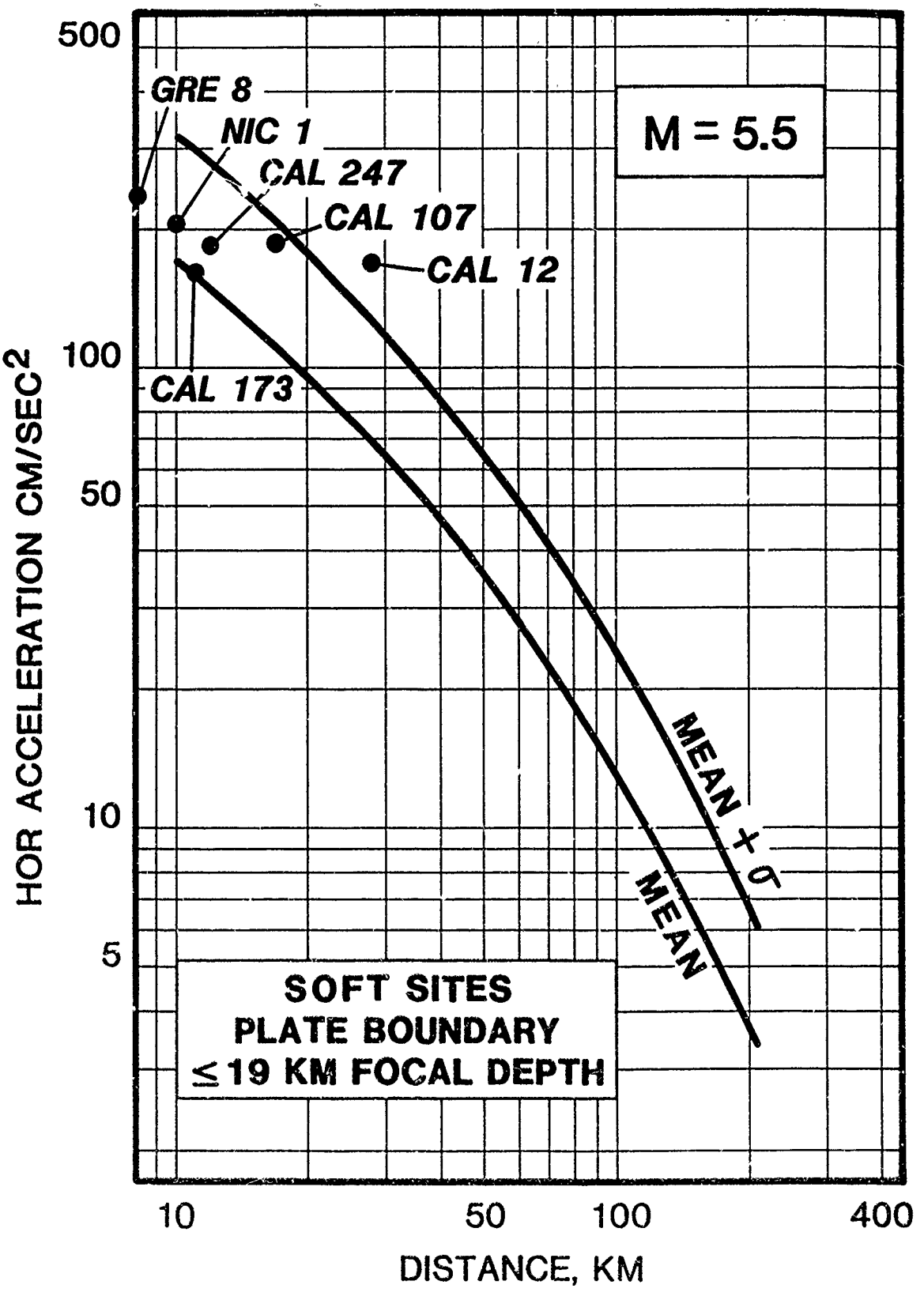


Figure 22a. Accelerograms for acceleration, M = 5.5, and distance from source for shallow earthquakes at soft sites. (See Table 22a.)

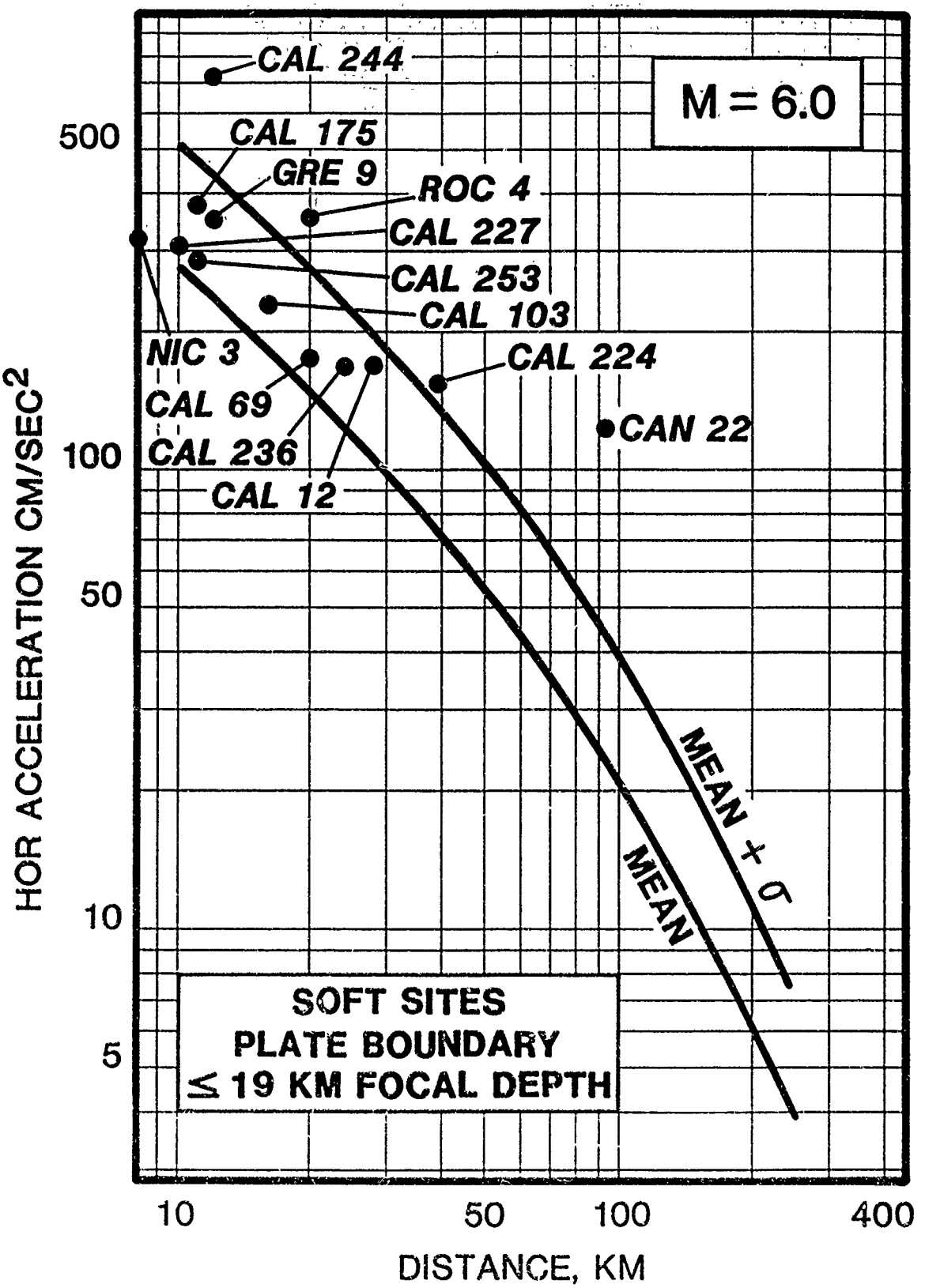


Figure 22b. Accelerograms for acceleration, M = 6.0, and distance from source for shallow earthquakes at soft sites. (See Table 22b.)

Table 22c

Shallow-Soft-Accel-Mag 6.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
10	306	410	1.33	790	2.58	CAL 227
12	350	370	1.06	700	2.00	GRE 9
12	970	370	0.38	700	0.72	CAL 243
14	383	330	0.86	600	1.72	CAL 163
19	197	230	1.17	420	2.13	CAL 131
22	246	205	0.83	385	1.57	CAL 126
23	281	200	0.71	380	1.35	GRE 7
24	168	190	1.13	370	2.20	CAL 236
28	165	155	0.94	300	1.82	CAL 9
32	197	135	0.68	260	1.32	CAL 53
32	175	135	0.77	260	1.49	ROC 7
34	221	130	0.59	250	1.13	CAL 40
36	238	120	0.50	245	1.03	CAL 232
39	210	110	0.52	200	0.95	CAL 223
42	154	100	0.65	185	1.20	CAL 62
42	218	100	0.46	185	0.85	ITA 24
93	123	33	0.27	59	0.48	CAN 22

Table 22d

Shallow-Soft-Accel-Mag 7.0

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
13	576	570	0.99	1000	1.74	CAL 115
14	441	500	1.13	970	2.20	CAL 184
17	342	400	1.17	760	2.22	CAL 3
18	495	390	0.79	615	1.24	CAL 385
20	362	350	0.97	660	1.82	CAL 356
22	246	310	0.90	610	2.48	CAL 126
23	281	305	1.09	595	2.12	GRE 7
23	362	300	0.83	585	1.62	CAL 376
26	239	270	1.13	505	2.11	CAL 323
26	250	260	1.04	530	2.12	CAL 24
28	253	240	0.95	470	1.86	CAL 8
30	262	230	0.88	425	1.62	CAL 134
37	209	180	0.86	255	1.22	CAL 33
38	253	175	0.69	320	1.26	CAL 389
42	158	155	0.98	190	1.20	CAL 31
45	192	145	0.76	170	0.89	CAL 35
48	231	130	0.56	250	1.08	CAL 391
67	156	88	0.56	160	1.03	CAL 359
71	190	80	0.42	150	0.79	ARG 1

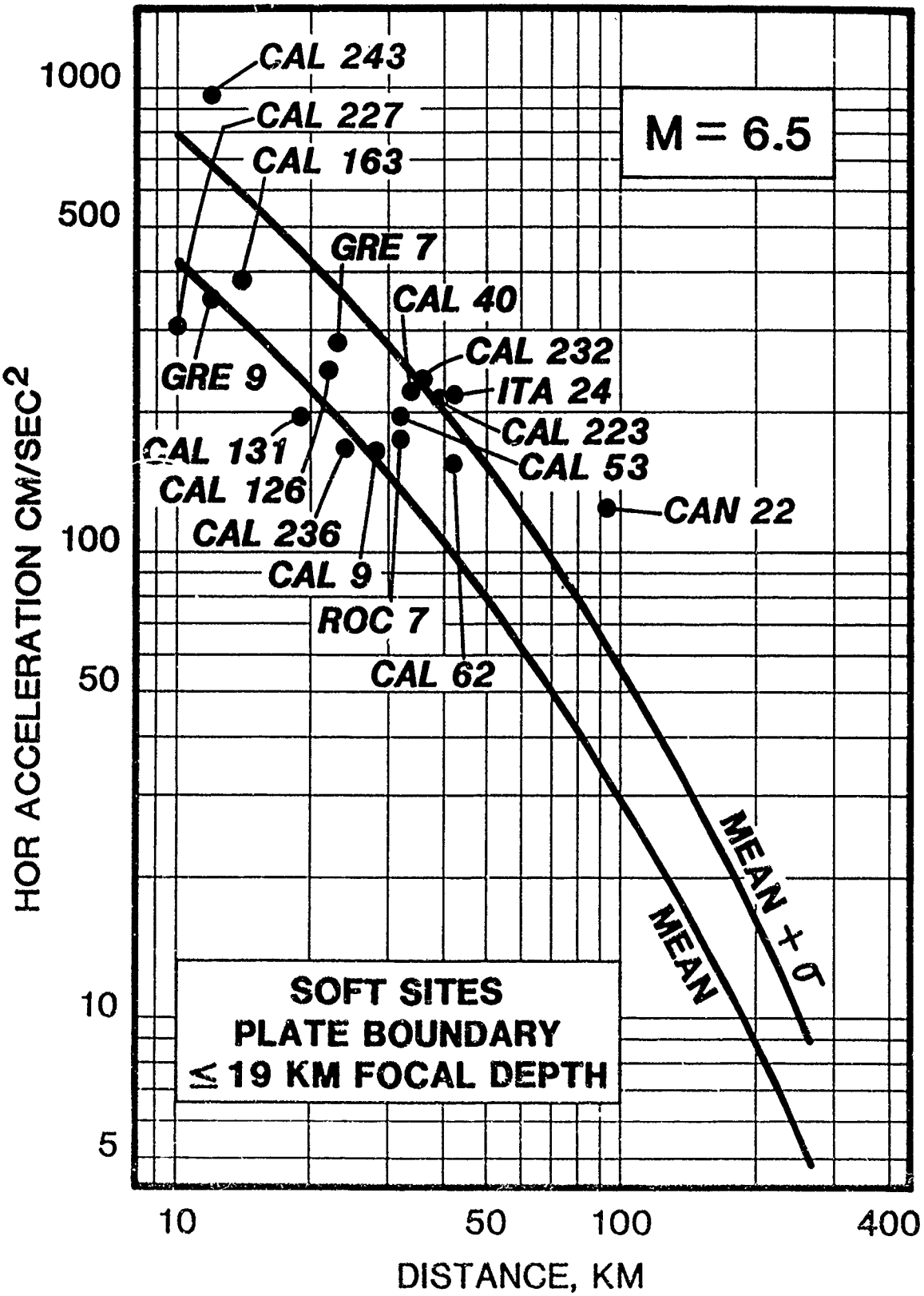


Figure 22c. Accelerograms for acceleration, M = 6.5, and distance from source for shallow earthquakes at soft sites. (See Table 22c.)

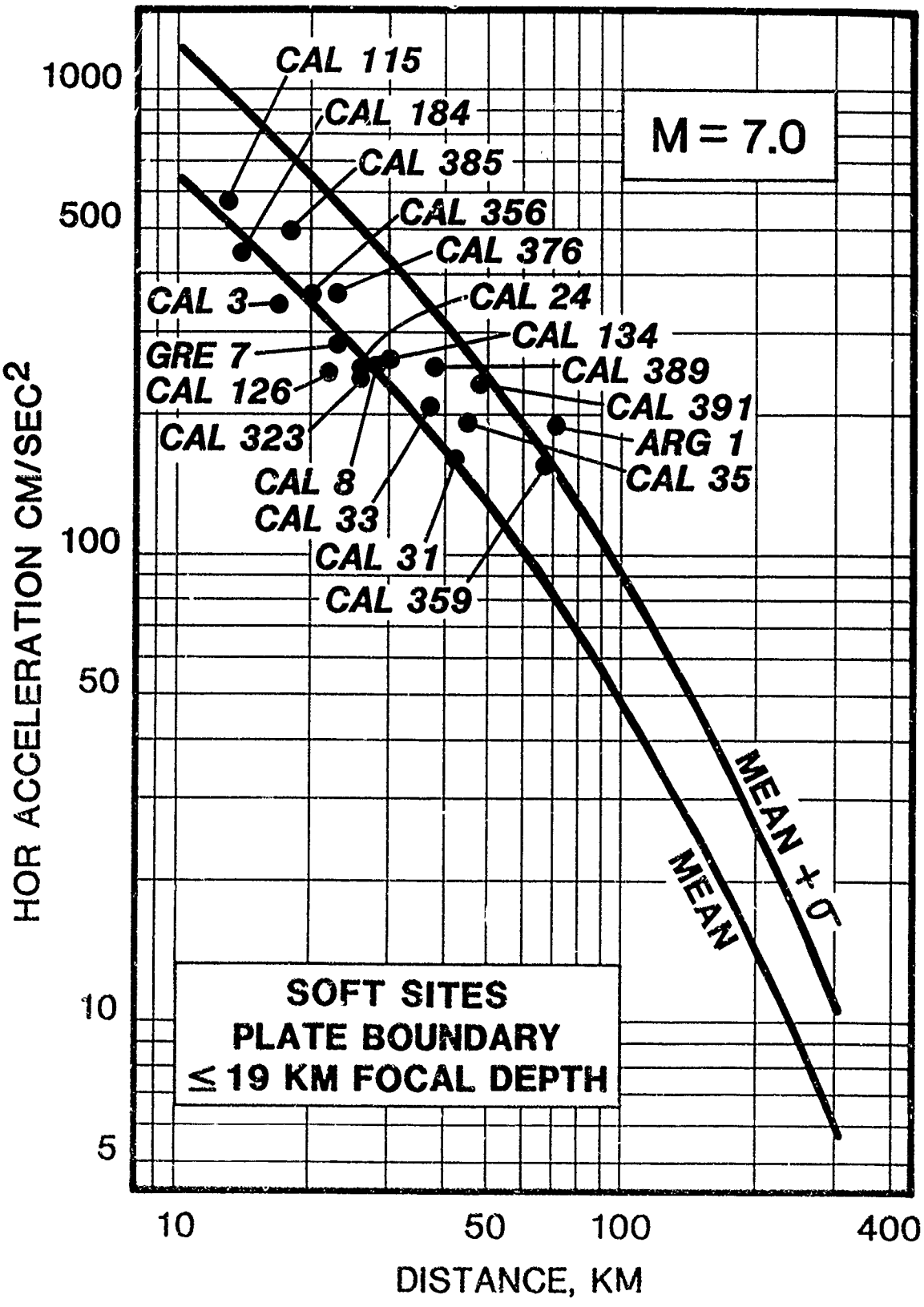


Figure 22d. Accelerograms for acceleration, M = 7.0, and distance from source for shallow earthquakes at soft sites. (See Table 22d.)

Table 22e

Shallow-Soft-Accel-Mag 7.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
14	514	900	1.75	1500	2.92	CAL 183
17	342	700	2.05	1300	3.80	CAL 3
18	495	660	1.33	1250	2.52	CAL 385
20	362	580	1.60	1150	3.18	CAL 356
23	463	485	1.05	920	1.99	CAL 353
25	408	440	1.08	880	2.16	CAL 377
29	477	400	0.84	700	1.47	CAL 120
31	292	355	1.22	600	2.05	CAL 187
38	253	285	1.13	530	2.09	CAL 389
40	207	260	1.26	500	1.71	CAL 27
44	221	230	1.04	430	1.95	CAL 61
46	153	220	1.44	415	2.71	CAL 7
49	200	210	1.05	390	1.95	CAL 136
51	231	190	0.82	375	1.62	CAL 391
62	179	160	0.89	175	0.98	CAL 2
67	156	140	0.90	265	1.70	CAL 359
71	190	130	0.68	90	0.47	ARG 1

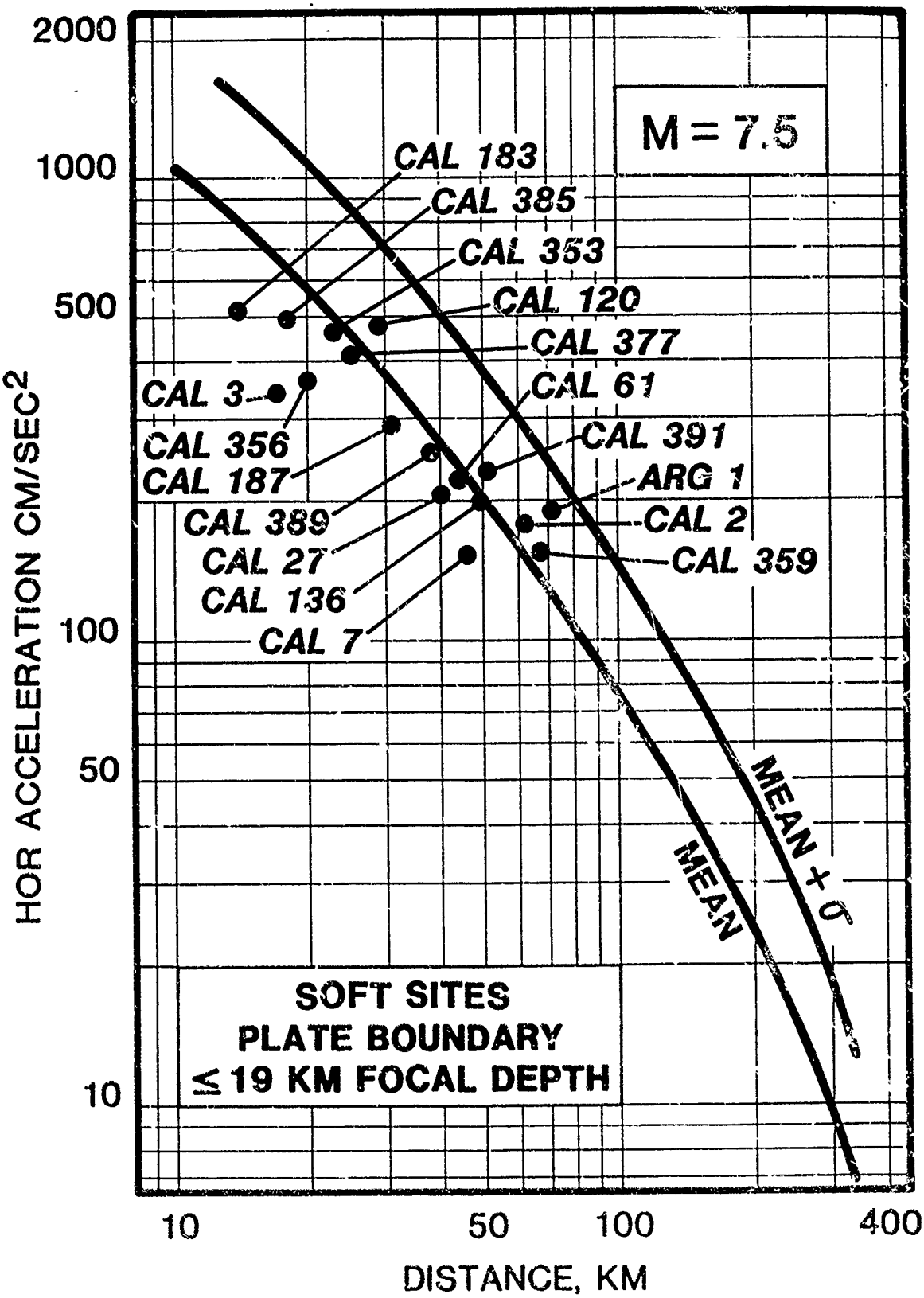


Figure 22e. Accelerograms for acceleration, M = 7.5, and distance from source for shallow earthquakes at soft sites. (See Table 22e.)

64. Generic accelerograms with velocity in cm/sec as the parameter follow.

Table 23a

Shallow-Soft-Vel-Mag 5.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
8	12.8	22.0	1.73	40.0	3.12	GRE 14
10	14.0	21.0	1.51	38.0	2.71	NIC 1
11	21.7	20.0	0.92	37.0	1.71	CAL 253
12	12.9	16.5	1.28	32.0	2.48	CAL 247
16	16.9	14.0	0.83	25.0	1.48	CAL 104
17	10.2	12.5	1.23	24.0	2.35	CAL 107
27	8.7	7.2	0.83	14.0	1.61	CAL 275
28	10.8	6.9	0.64	12.0	1.11	CAL 12

Table 23b

Shallow-Soft-Vel-Mag 6.0

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
8	30.3	41.0	1.35	70.0	2.31	NIC 3
10	39.6	39.0	0.98	65.0	1.64	CAL 227
11	43.5	36.0	0.83	62.0	1.43	CAL 175
11	21.7	36.0	1.66	62.0	2.86	CAL 253
12	23.7	34.0	1.44	59.0	2.49	GRE 9
12	33.0	34.0	1.03	59.0	1.79	CAL 244
16	25.2	24.0	0.92	42.0	1.66	CAL 103
20	11.3	16.0	1.42	33.0	2.92	ROC 4
24	18.6	15.0	0.81	26.0	1.40	CAL 272
28	10.8	12.5	1.16	25.0	2.04	CAL 12
33	22.5	10.5	0.47	18.0	1.25	CAL 15
38	16.7	8.7	0.52	16.0	0.96	CAL 219
93	3.8	2.6	0.70	4.8	1.2	CAN 22
93	5.3	2.6	0.49	4.8	0.9	CAN 21

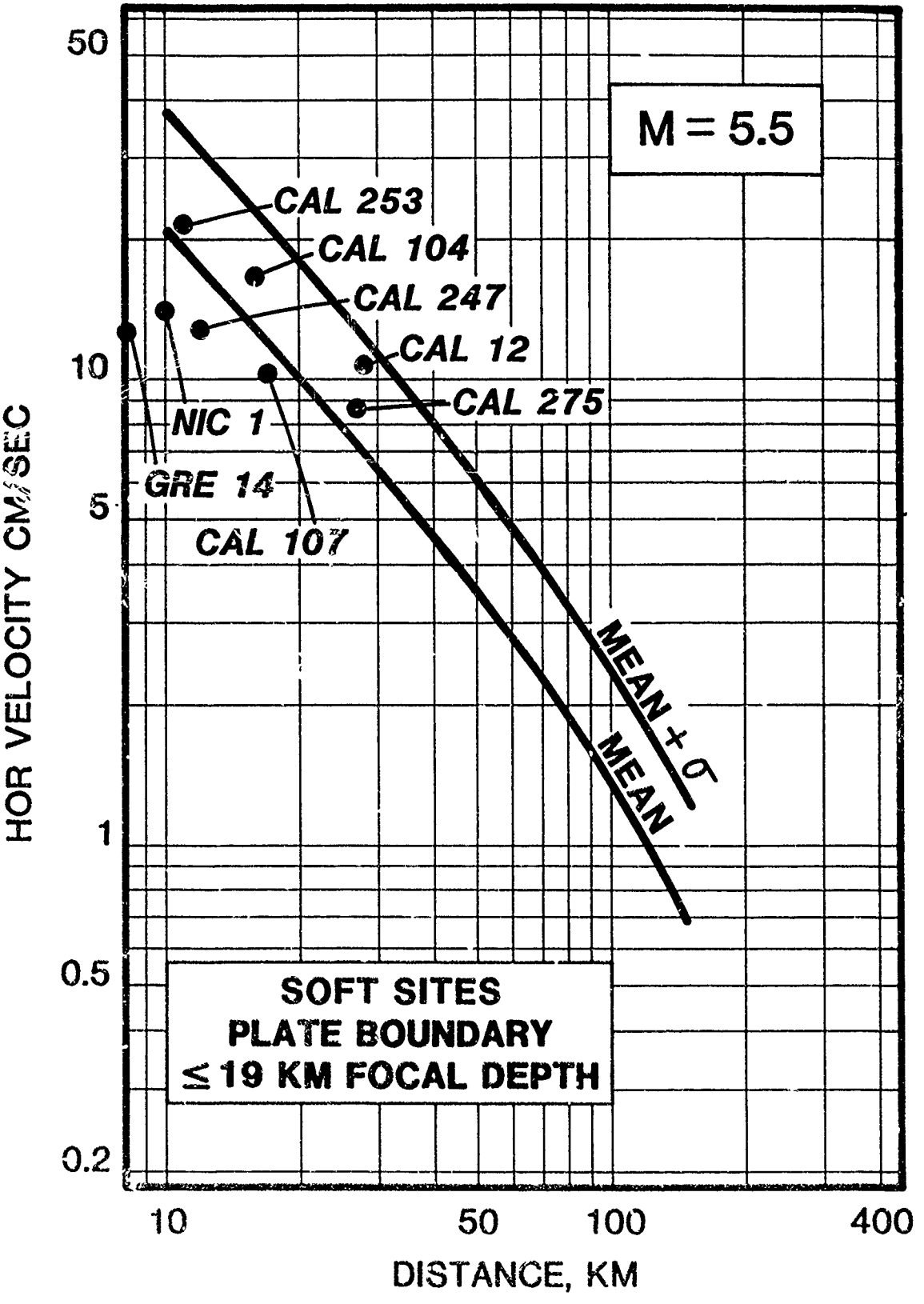


Figure 23a. Accelerograms for velocity, M = 5 5, and distance from source for shallow earthquakes at soft sites. (See Table 23a.)

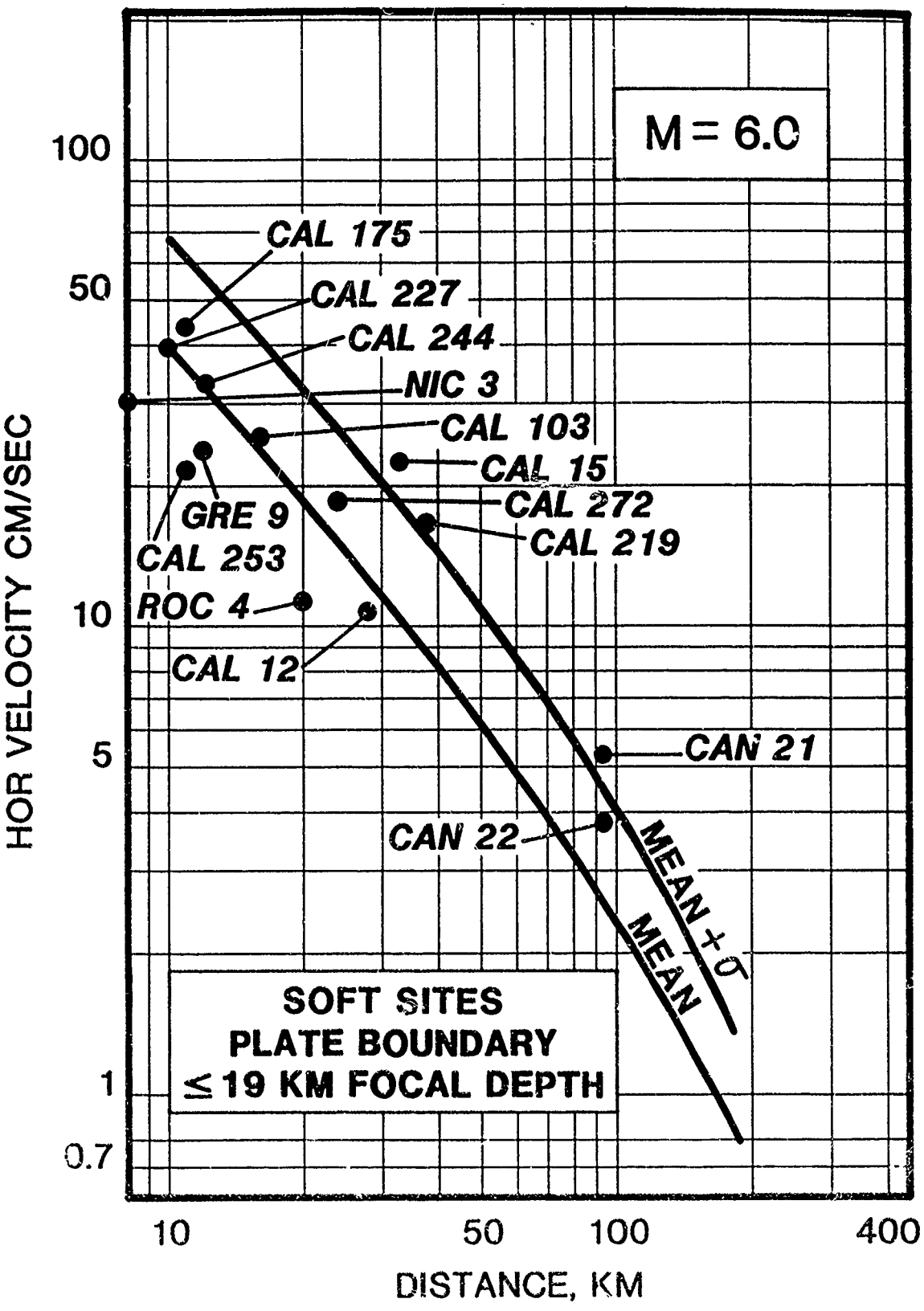


Figure 23b. Accelerograms for velocity, M = 6.0, and distance from source for shallow earthquakes at soft sites (See Table 23b.)

Table 23c

Shallow-Soft-Vel-Mag 6.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
10	39.6	68.0	1.72	120.0	0.30	CAL 227
12	23.7	58.0	2.45	100.0	4.22	GRE 9
12	86.0	58.0	0.67	100.0	1.16	CAL 243
14	23.6	50.0	0.47	86.0	3.65	CAL 163
14	50.0	50.0	1.00	86.0	1.72	CAL 184
22	44.7	27.5	0.62	48.0	1.07	CAL 126
23	24.6	26.5	1.08	45.0	1.83	GRE 7
28	31.6	20.5	0.65	38.0	1.20	CAL 9
32	17.6	17.0	0.97	38.0	2.16	CAL 53
32	15.1	17.0	1.13	30.0	1.99	ROC 7
38	16.7	14.6	0.87	27.0	1.62	CAL 219
42	16.3	13 0	0.80	25.0	1.53	CAL 37
42	15.1	17.0	1.13	25.0	1.66	ITA 24
49	14.6	11.5	0.79	18.0	1.23	CAL 136
62	11.5	8.0	0.70	14.0	1.22	CAL 2
93	3.8	4.8	1.2	7.9	2.0	CAN 22
93	5.3	4.8	0.9	7.9	0.7	CAN 21

Table 23d

Shallow-Soft-Vel-Mag 7.0

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
13	43.6	100.0	2.15	160.0	3.67	CAL 115
14	50.0	95.0	1.90	150.0	3.00	CAL 184
18	55.2	61.0	1.11	115.0	2.08	CAL 351
21	33.3	52.0	1.56	93.0	2.79	CAL 374
22	44.7	50.0	1.12	88.0	1.97	CAL 126
23	43.8	45.0	1.03	82.0	1.87	CAL 376
25	44.4	42.0	0.95	73.0	1.64	CAL 329
29	31.6	35.5	1.12	61.0	1.93	CAL 9
30	39.2	29.5	0.75	60.0	1.53	CAL 132
33	31.2	28.0	0.90	56.0	1.79	CAL 138
38	31.8	26.0	0.82	42.0	1.32	CAL 389
40	21.1	24.0	1.14	42.5	2.01	CAL 27
44	19.3	21.5	1.11	37.0	1.92	CAL 60
49	14.6	19.0	1.30	32.0	2.19	CAL 136
51	26.5	18.0	0.68	31.0	1.17	CAL 391
62	11.5	14.6	1.30	24.0	2.09	CAL 2
71	20.6	11 6	0.56	20.0	0.97	ARG 1

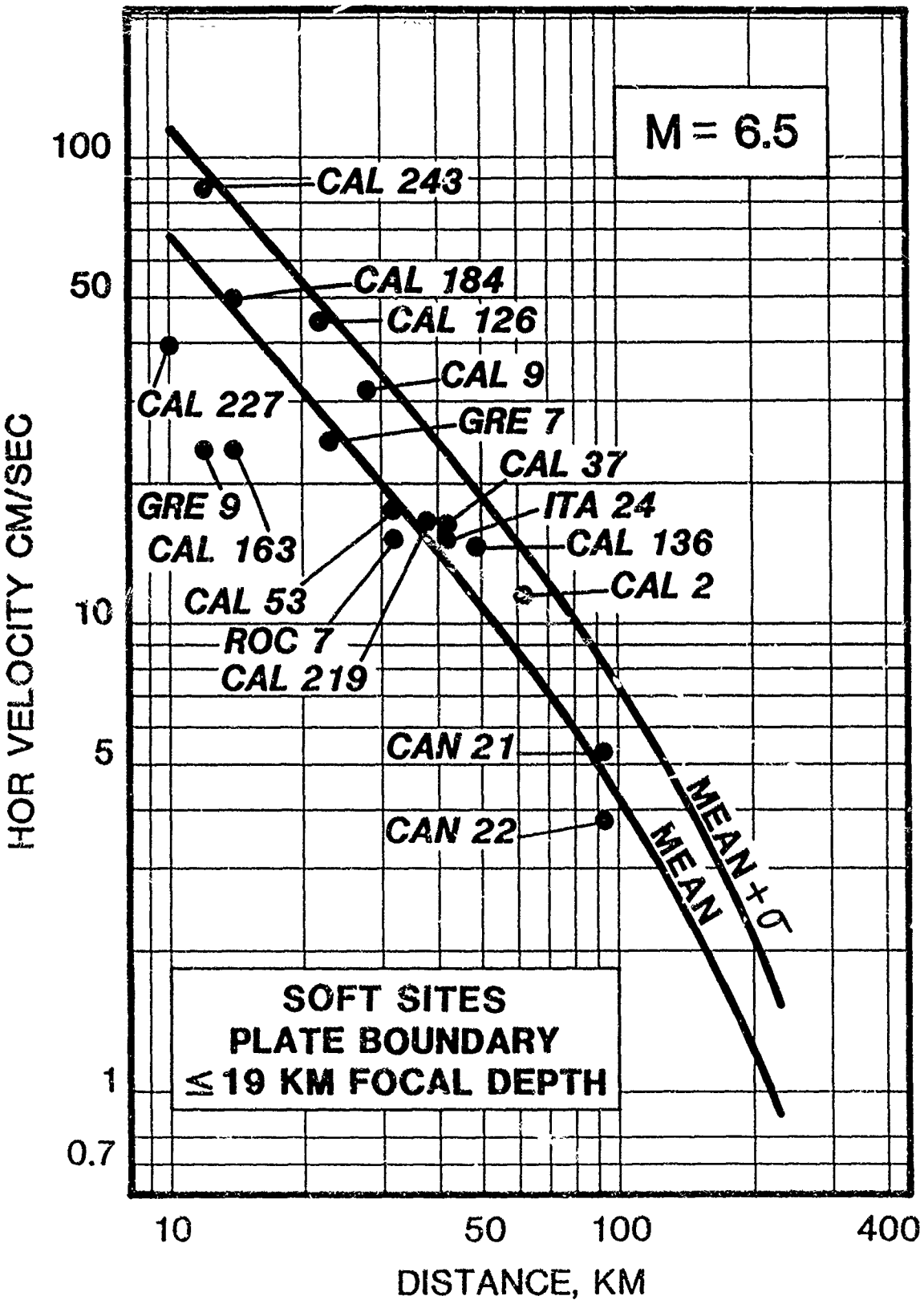


Figure 23c. Accelerograms for velocity, M = 6.5, and distance from source for shallow earthquakes at soft sites. (See Table 23c.)

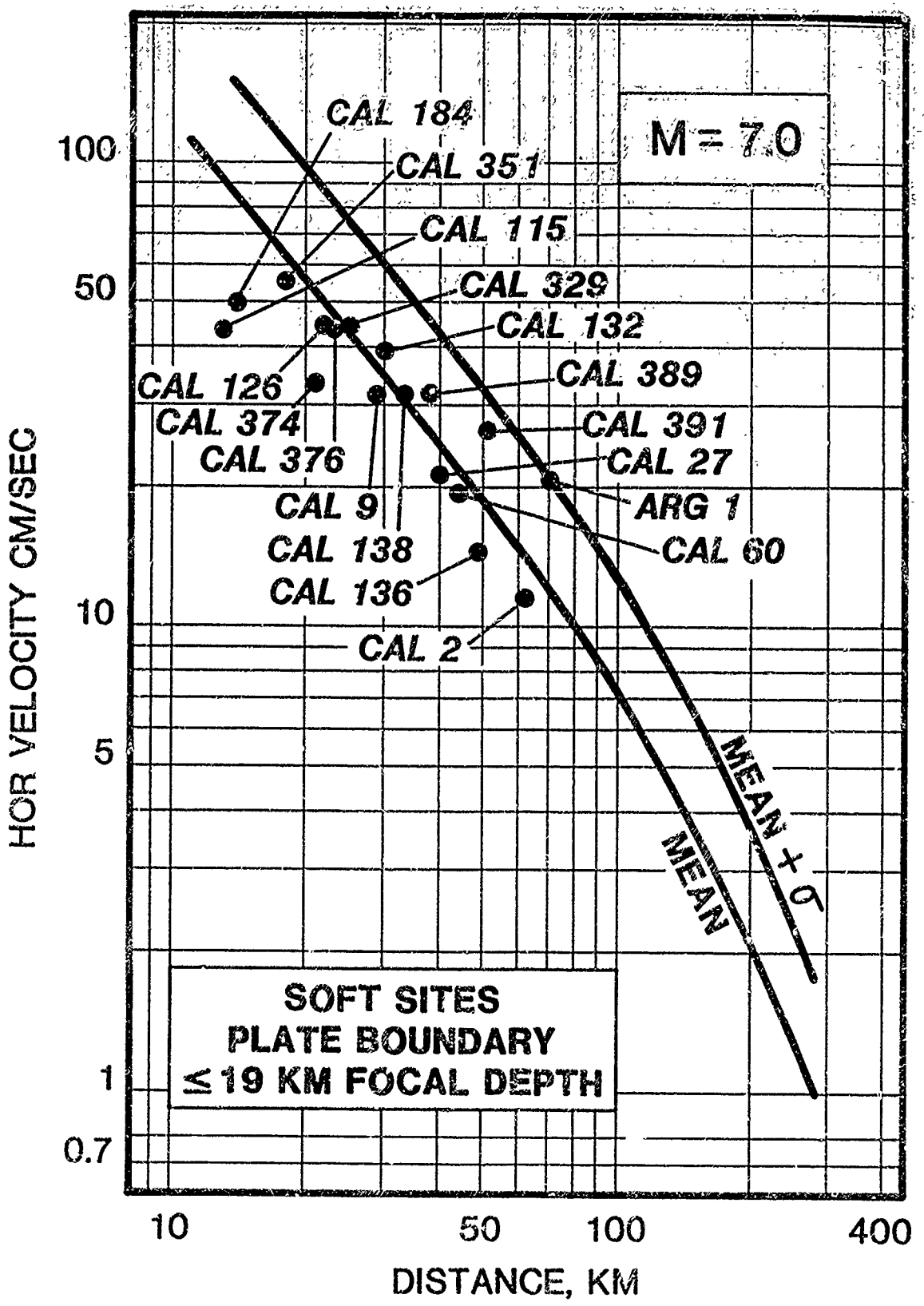


Figure 23d. Accelerograms for velocity, M = 7.0, and distance from source for shallow earthquakes at soft sites. (See Table 23d.)

Table 23e

Shallow-Soft-Vel-Mag 7.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
14	50.0	150.0	3.00	180.0	3.60	CAL 184
18	55.2	120.0	2.17	200.0	3.62	CAL 351
20	62.8	100.0	1.59	175.0	2.79	CAL 356
22	48.4	90.0	1.86	170.0	3.51	CAL 127
30	63.1	61.0	0.97	120.0	1.90	CAL 111
30	44.3	61.0	1.38	120.0	2.71	CAL 129
38	31.8	48.0	1.51	82.0	2.58	CAL 389
42	17.7	40.0	2.26	72.0	4.07	CAL 6
44	37.1	36.0	0.97	68.0	1.83	CAL 124
51	26.5	33.0	1.25	58.0	2.19	CAL 391
67	33.4	23.0	0.69	41.0	1.23	CAL 359
71	20.6	20.0	0.97	36.0	1.75	ARG 1

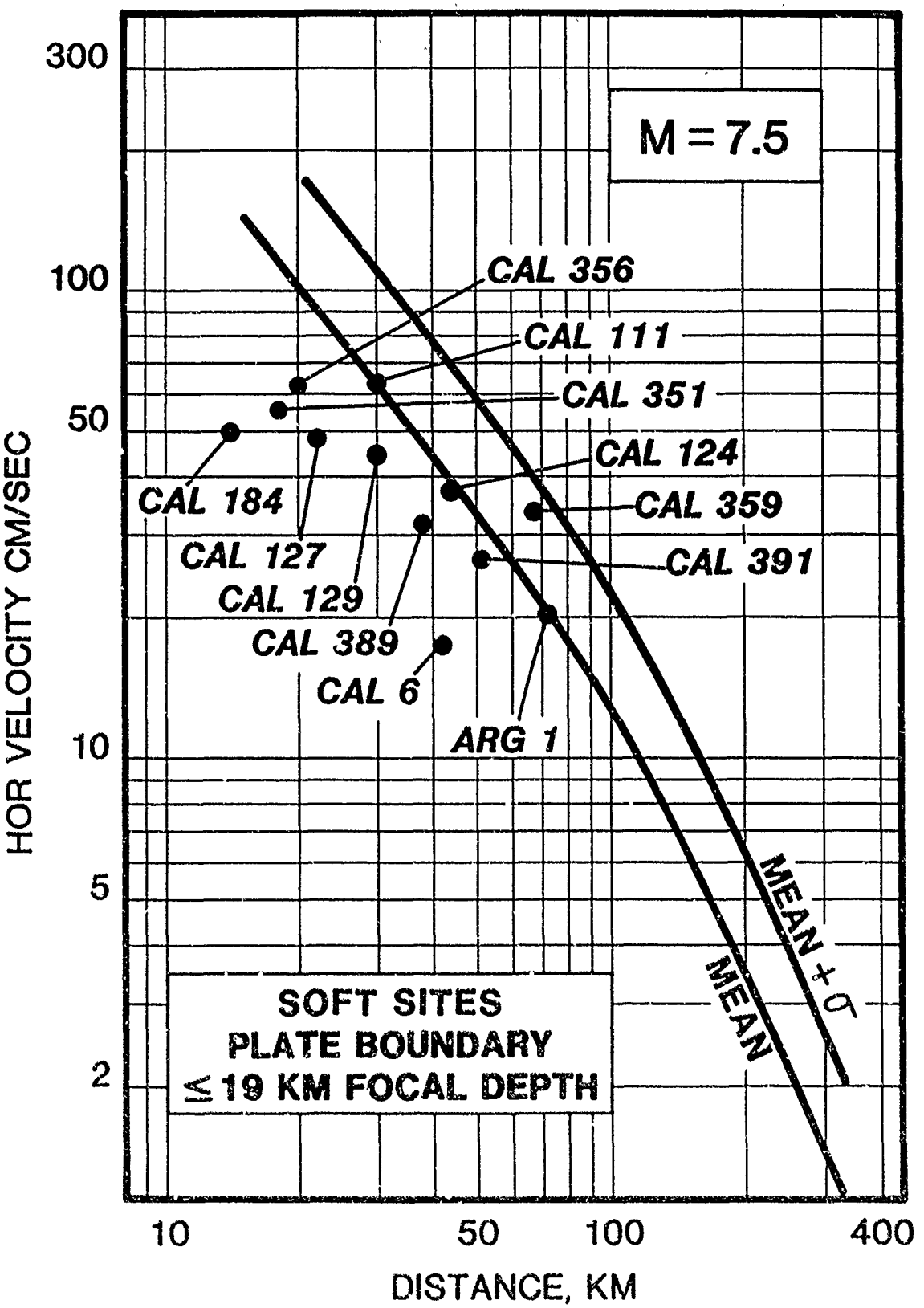


Figure 23e. Accelerograms for velocity, M = 7.5, and distance from source for shallow earthquakes at soft sites. (See Table 23e.)

65. Generic accelerograms with horizontal duration (bracketed 0.05 g or more) in seconds as the parameter follow.

Table 24a

Shallow-Soft-Dur-Mag 5.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
8	2.7	1.9	-0.8	2.5	-0.2	GRE 14
12	5.6	2.1	-3.5	3.1	-2.5	CAL 247
17	5.6	2.7	-2.9	4.0	-1.6	CAL 275
28	8.0	3.7	-4.3	5.3	-2.7	CAL 12
35	7.4	4.2	-3.2	6.2	-1.2	CAL 15

Table 24b

Shallow-Soft-Dur-Mag 6.0

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
11	6.8	3.6	-3.2	5.0	-1.8	CAL 253
12	7.9	3.8	-4.1	5.3	-2.6	GRE 9
16	8.8	4.7	-4.1	6.6	-2.2	CAL 103
20	5.6	5.1	-0.5	7.3	+1.7	CAL 69
24	3.5	5.8	+2.3	8.0	+4.5	CAL 272
28	8.0	6.4	-1.6	8.9	+0.9	CAL 12
33	7.4	7.0	-0.4	10.0	+2.6	CAL 15
39	8.1	7.9	-0.2	11.0	+2.9	CAL 224
93	10.6	13.0	+2.4	17.0	+6.4	CAN 22
93	9.9	13.0	+3.1	17.0	+4.0	CAN 21

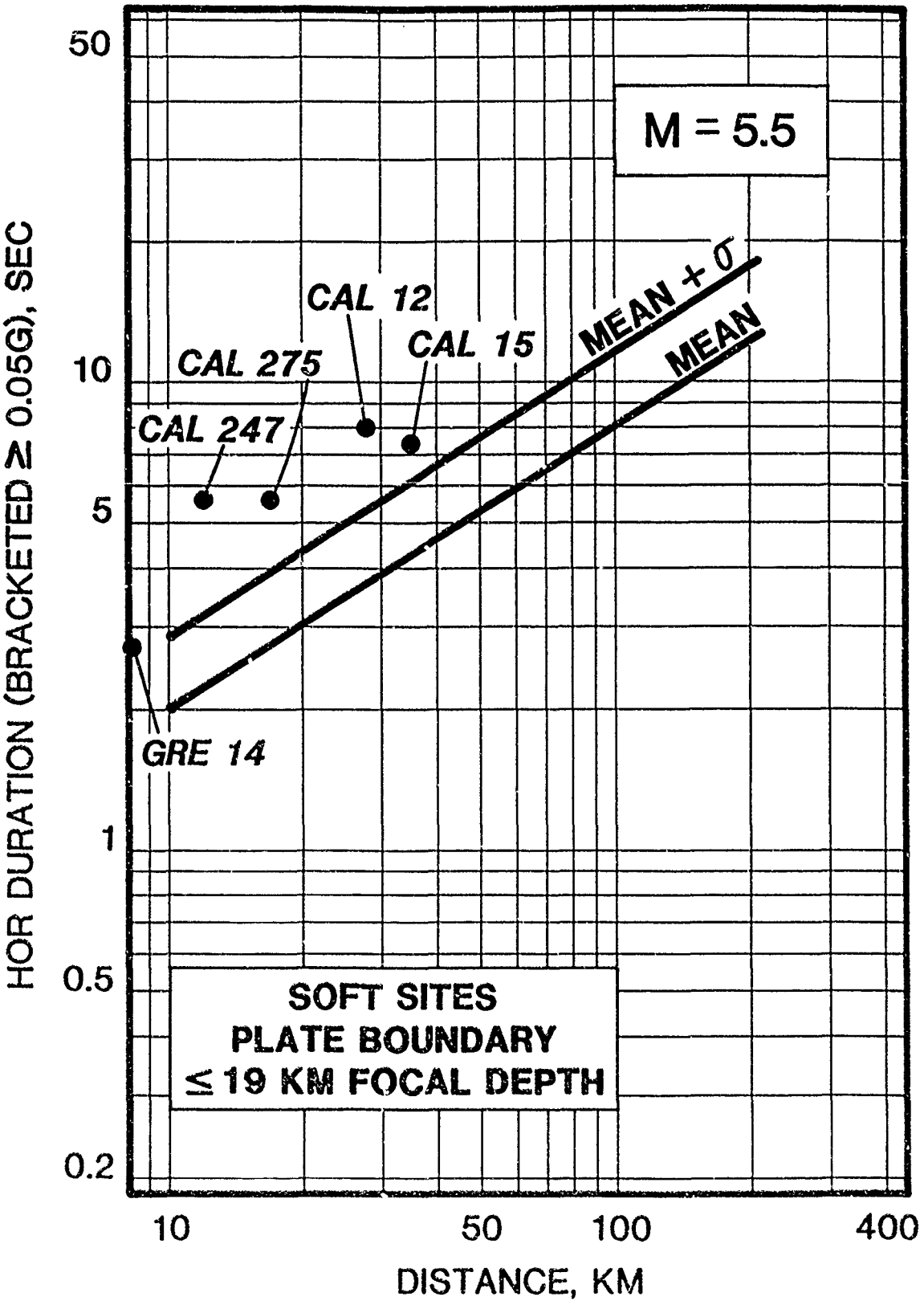


Figure 24a. Accelerograms for duration, M = 5.5, and distance from source for shallow earthquakes at soft sites. (See Table 24a.)

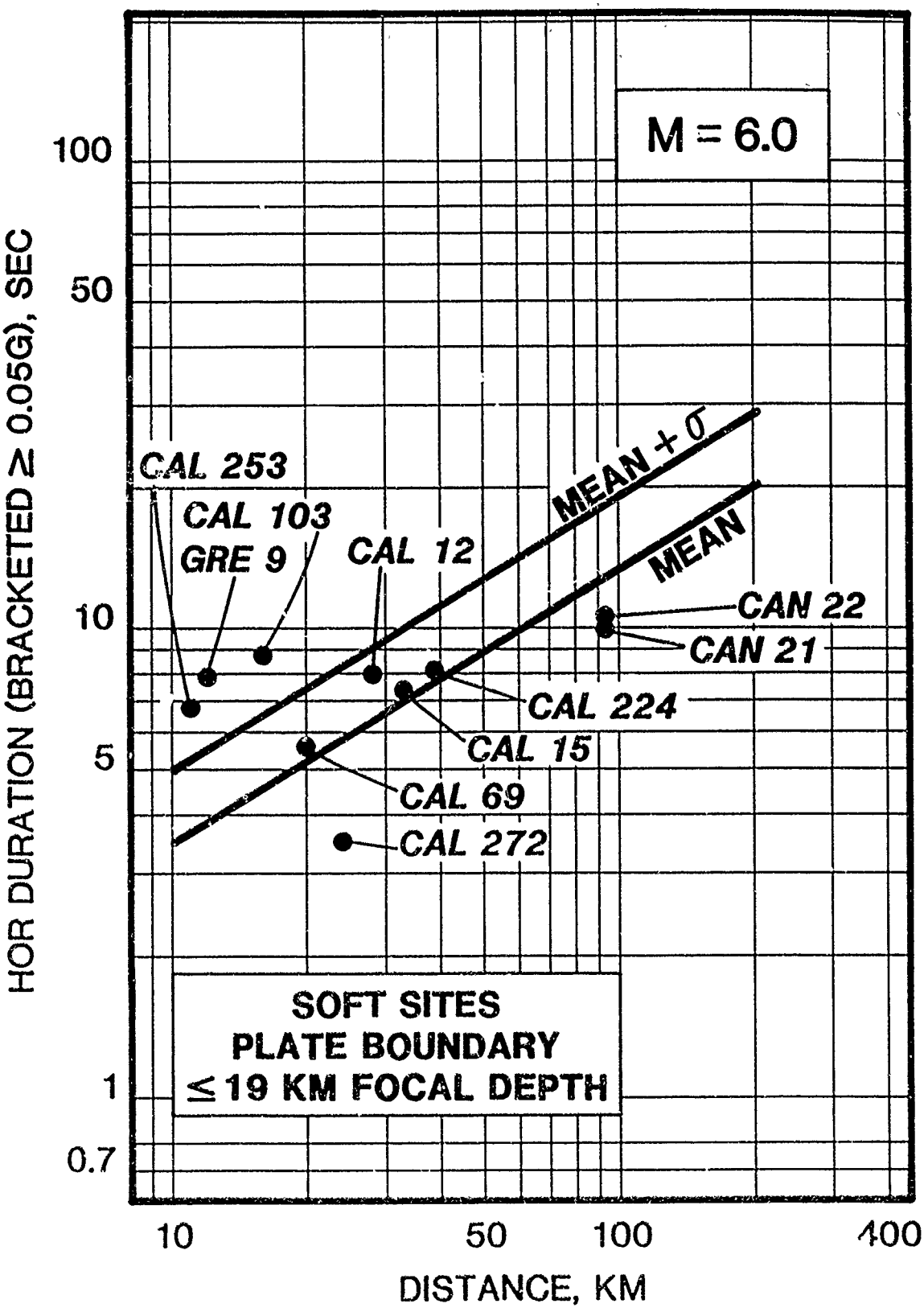


Figure 24b. Accelerograms for duration, M = 6.0, and distance from source for shallow earthquakes at soft sites. (See Table 24b.)

Table 24c

Shallow-Soft-Dur-Mag 6.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
10	11.6	5.5	-6.1	7.9	-3.7	CAL 227
12	7.9	6.0	-1.9	8.6	+0.7	GRE 9
14	6.5	6.7	+0.2	9.2	+2.7	CAL 163
19	19.1	8.0	11.1	12.5	-6.6	CAL 131
23	16.1	9.0	-7.1	13.0	-3.1	GRE 7
24	15.5	9.1	-6.4	13.1	-2.4	CAL 236
32	15.1	11.0	-4.1	15.2	+0.1	ROC 7
34	16.8	11.5	-5.3	16.5	-0.3	CAL 40
38	12.7	11.8	-0.9	17.0	+4.3	CAL 219
42	11.5	12.5	+1.0	18.0	+6.5	CAL 37
42	10.2	12.5	+2.3	18.0	+7.8	ITA 24
49	10.0	13.8	+3.8	20.0	+10.0	CAL 136
62	18.2	16.5	-1.7	24.0	+5.8	CAL 2
93	10.6	21.0	+10.4	30.0	+19.4	CAN 22
93	9.9	21.0	+11.1	30.0	+20.1	CAN 21

Table 24d

Shallow-Soft-Dur-Mag 7.0

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
14	17.5	11.1	-6.4	14.6	-2.9	CAL 184
18	15.4	13.0	-2.4	18.0	+2.6	CAL 385
21	12.8	14.0	+1.2	20.0	+7.2	CAL 374
22	17.6	14.6	-3.0	21.0	+3.4	CAL 126
23	16.1	14.5	-1.6	22.0	+5.9	GRE 7
25	16.7	15.5	-1.2	22.0	+5.3	CAL 329
26	18.0	16.5	-1.5	23 0	+5.0	CAL 24
30	11.7	18.0	+6.3	26.5	+14.8	CAL 132
33	14.3	19.0	+4.7	26.5	+12.2	CAL 138
38	26.4	20.0	-6.4	28.0	+1.6	CAL 389
42	12.7	21.0	+8.3	30.5	+17.8	CAL 31
62	18.2	27.0	+8.8	39.0	+20.8	CAL 2
71	49.6	29.0	-20.6	41.0	-8.6	ARG 1

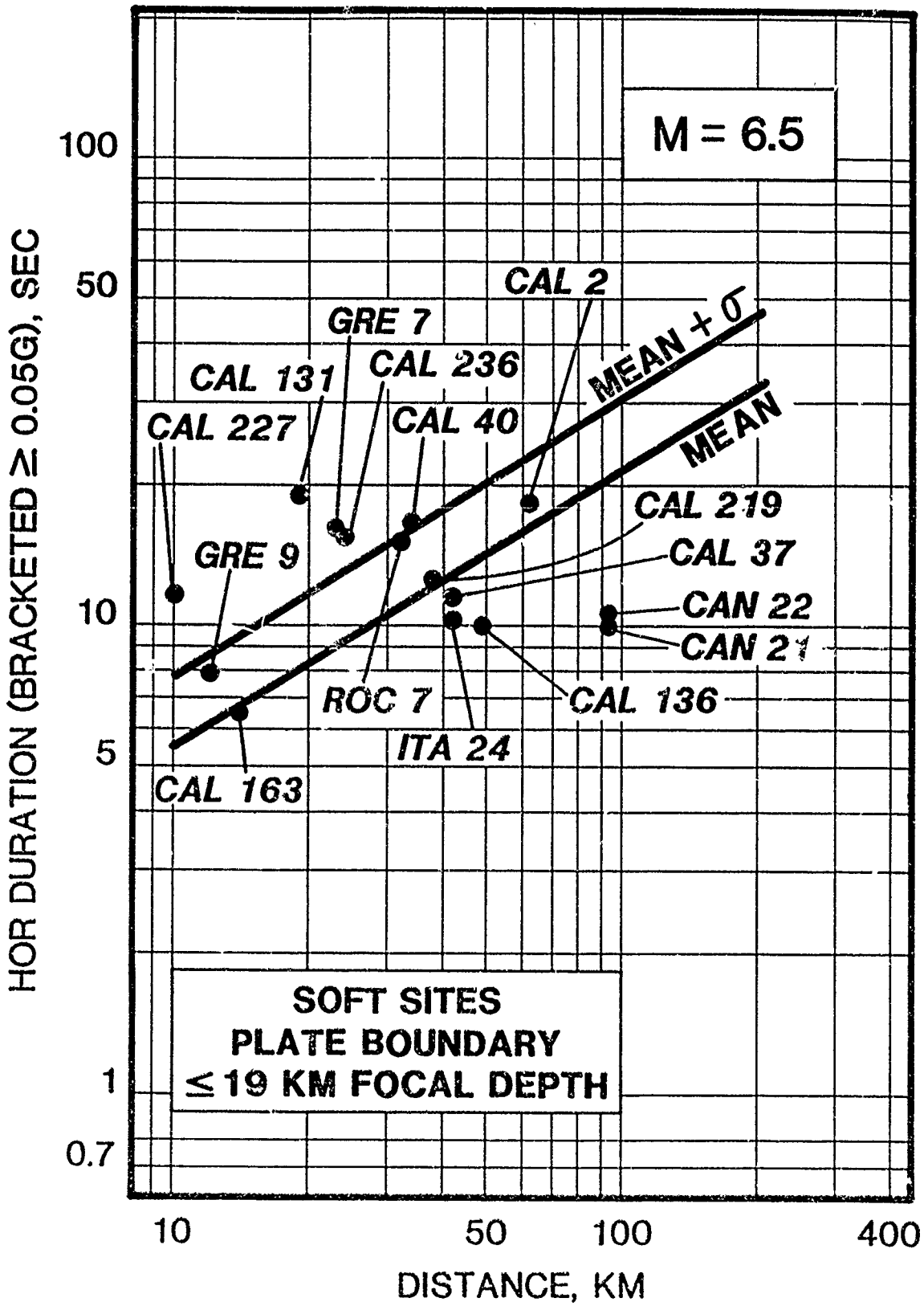


Figure 24c. Accelerograms for duration, M = 6.5, and distance from source for shallow earthquakes at soft sites. (See Table 24c.)

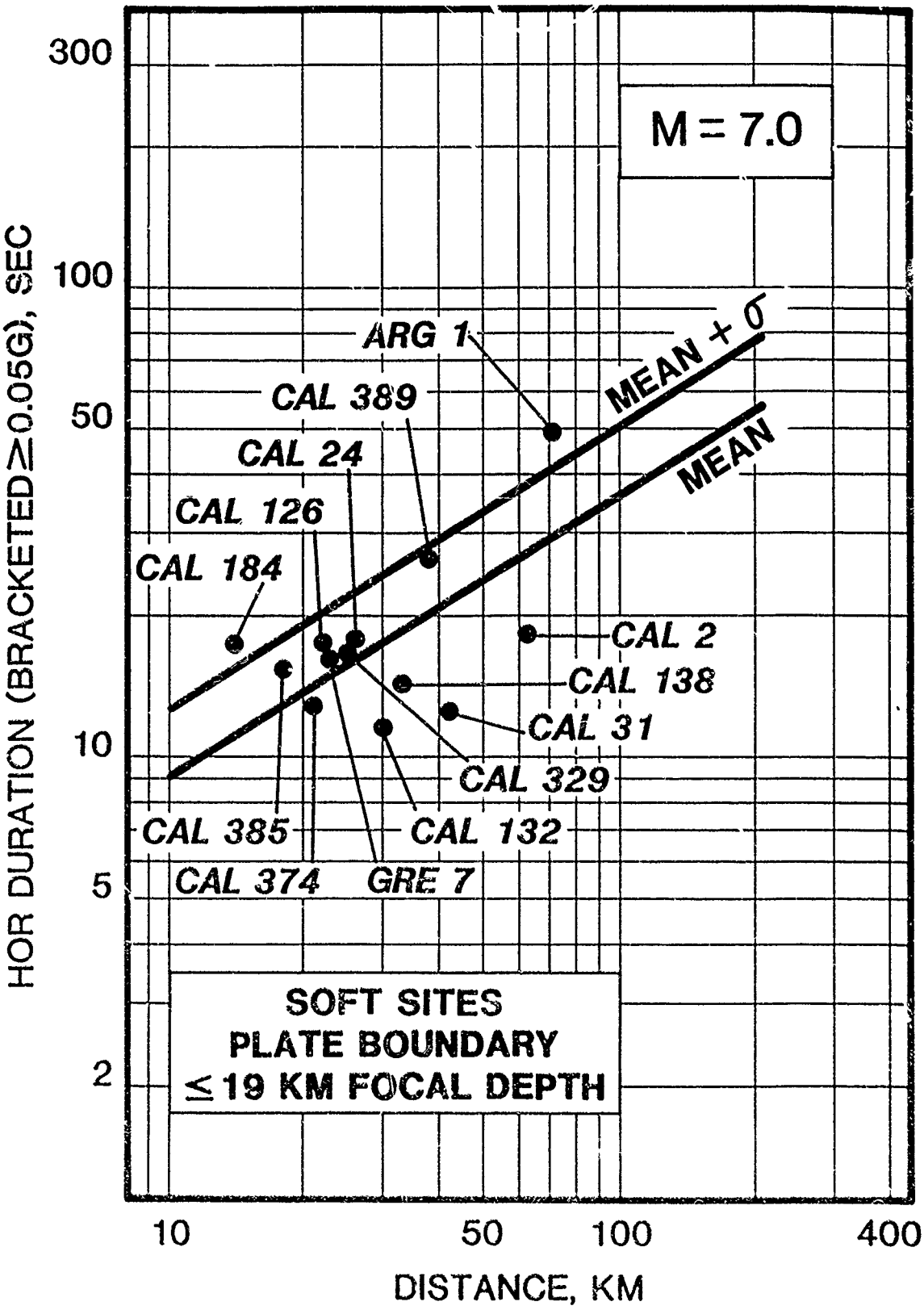


Figure 24d. Accelerograms for duration, M = 7.0, and distance from source for shallow earthquakes at soft sites. (See Table 24d.)

Table 24e

Shallow-Soft-Dur-Mag 7.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
14	17.5	18.0	-0.5	25.0	+7.5	CAL 184
17	29.0	21.0	-8.0	28.0	-1.0	CAL [illegible]
18	15.5	21.5	+6.0	30.5	+9.0	CAL 351
20	23.8	23.0	-0.8	32.5	+8.5	CAL 356
22	16.0	24.5	+8.5	35.0	+19.0	CAL 127
23	25.0	25.0	0.0	37.0	+12.0	CAL 353
30	12.4	28.5	+16.1	41.5	+29.1	CAL 129
38	26.4	32.0	+5.6	48.5	+16.5	CAL 389
42	20.0	36.0	+16.0	51.0	+31.0	CAL 6
46	20.0	38.0	+18.0	52.5	+32.5	CAL 7
62	18.2	42.5	+24.3	63.0	+44.8	CAL 2
71	49.6	49.0	-0.6	69.0	+19.4	ARG 1

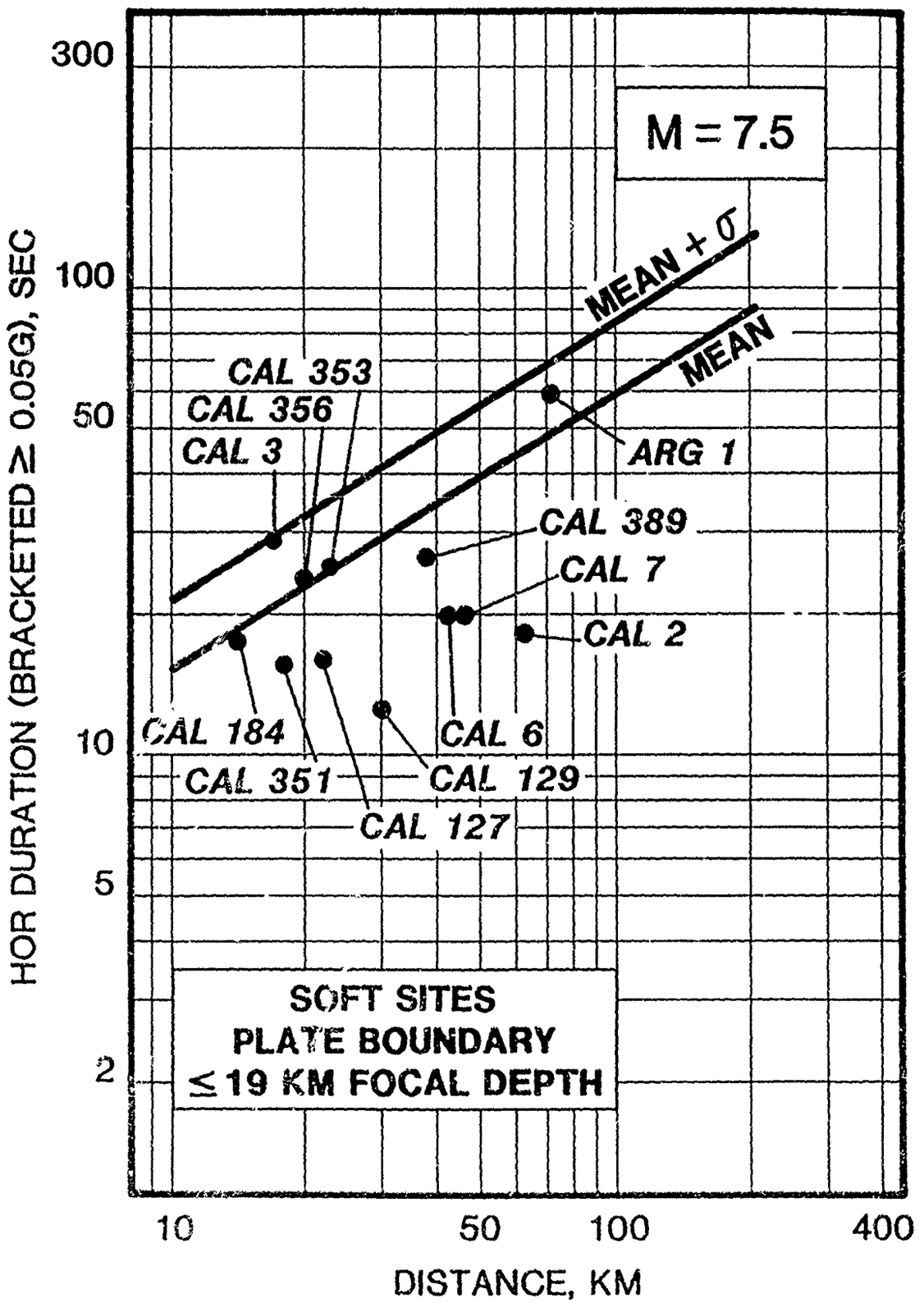


Figure 24.. Accelerograms for duration, M = 7.5, and distance from source for shallow earthquakes at soft sites. (See Table 24e.)

PART XIII: TABLES AND FIGURES FOR MAGNITUDE-RELATED PEAK GROUND MOTION FOR DEEP EVENTS ON HARD SITES

66. Generic accelerograms for deep event ground motion at hard sites with magnitude and acceleration as the parameters follow.

Table 25a

Deep-Hard-Accel-Mag 5.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
25	101	92	0.91	125	1.24	MEX 87*
31	147	90	0.61	120	0.82	MEX 76*
47	221	75	0.34	100	0.45	MEX 80*
47	187	75	0.40	100	0.53	CHL 39*
47	182	75	0.41	100	0.55	CHL 40*
67	102	64	0.63	88	0.86	MEX 81*
82	109	58	0.53	72	0.65	MEX 44*
104	211	34	0.16	50	0.24	MEX 83*

Table 25b

Deep-Hard-Accel-Mag 6.0

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
31	147	130	0.88	165	1.12	MEX 76*
45	293	115	0.39	145	0.50	MEX 21*
47	221	110	0.50	160	1.38	MEX 80*
67	102	91	0.89	120	1.18	MEX 81*
104	211	58	0.27	78	0.40	MEX 83*

Table 25c

Deep-Hard-Accel-Mag 6.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
50	134	165	1.23	220	1.64	MEX 66*
86	122	120	0.98	150	1.23	MEX 48*
169	154	51	0.33	67	0.42	MEX 51*
219	110	26	0.24	30	0.27	MEX 53*

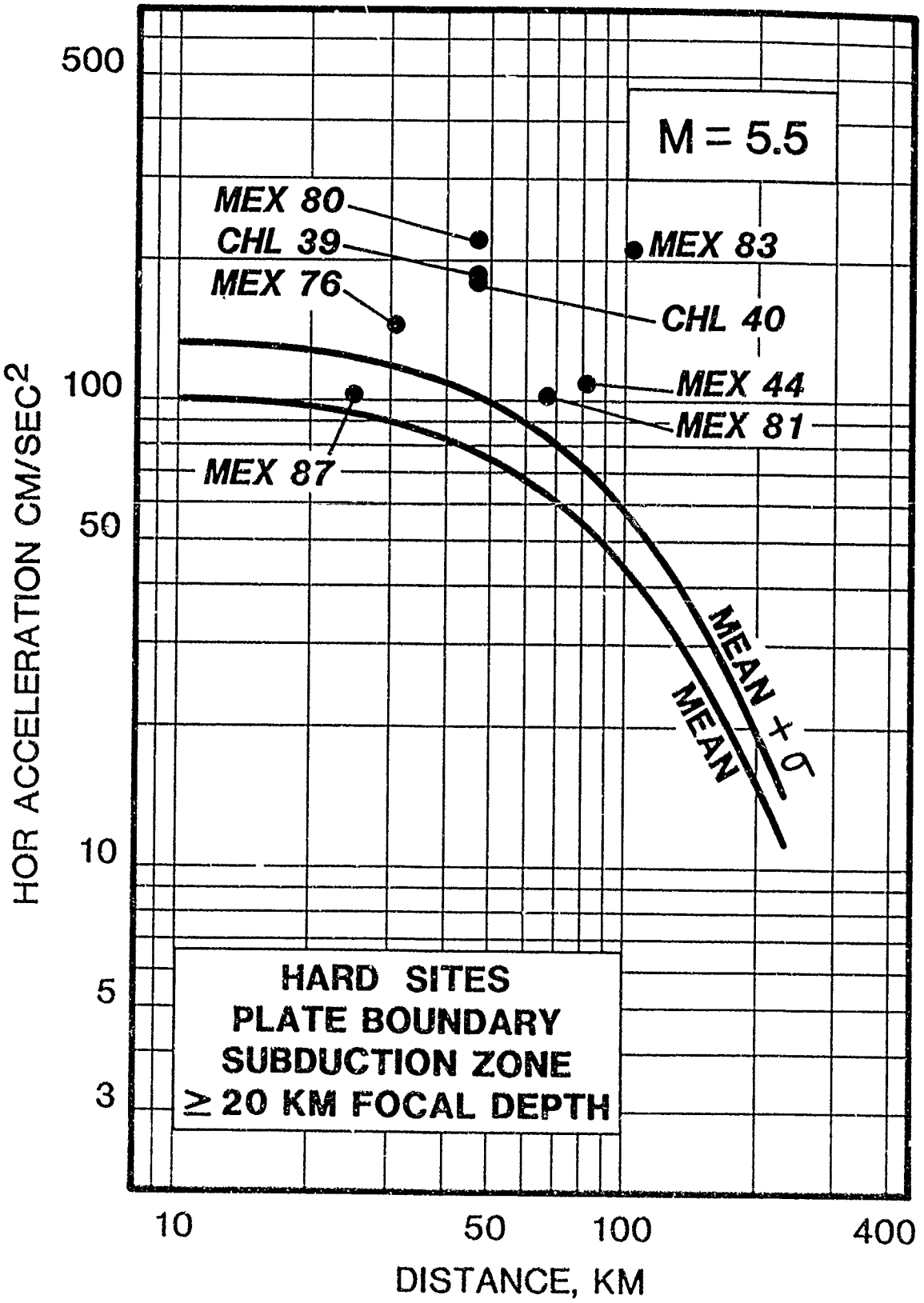


Figure 25a. Accelerograms for acceleration, M = 5.5, and distance from source for deep earthquakes at hard sites. (See Table 25a.)

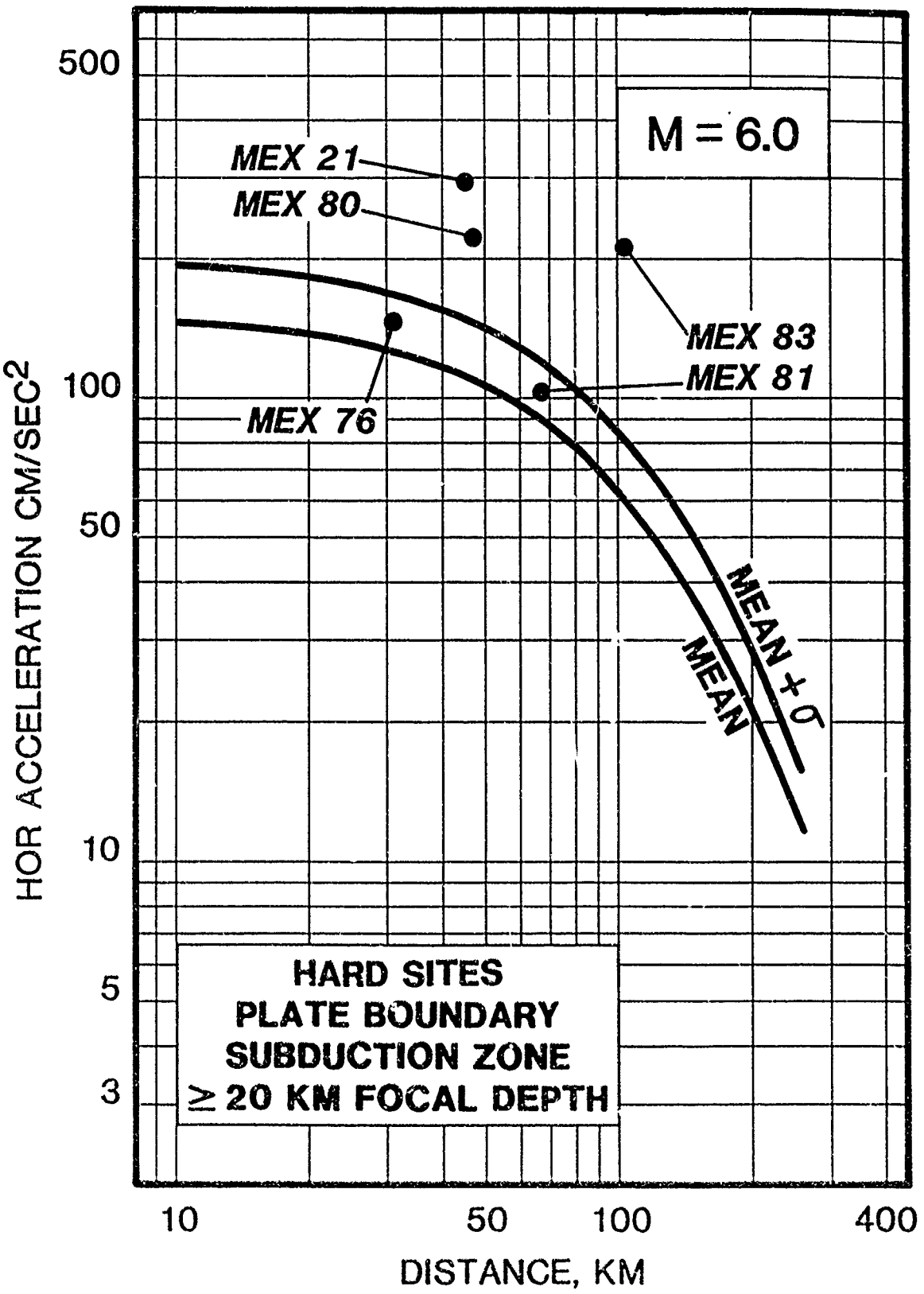


Figure 25b. Accelerograms for acceleration, M = 6.0, and distance from source for deep earthquakes at hard sites. (See Table 25b.)

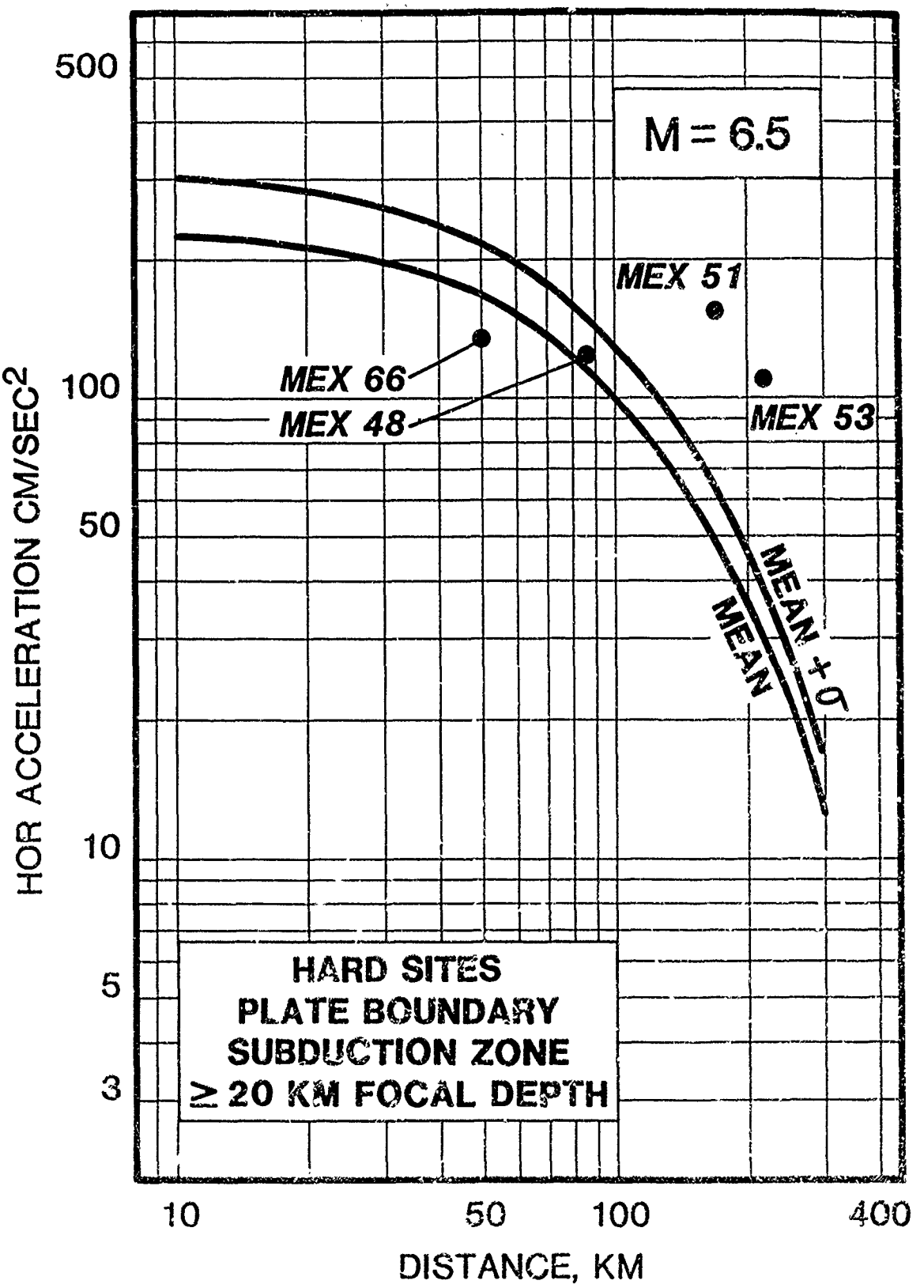


Figure 25c. Accelerograms for acceleration, M = 6.5, and distance from source for deep earthquakes at hard sites. (See Table 25c.)

Table 25d

Deep-Hard-Accel-Mag 7.0

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
82	182	165	0.91	200	1.10	AKA 1
86	122	170	1.39	215	1.76	MEX 48*
169	154	60	0.39	90	0.58	MEX 51*
219	110	40	0.36	50	0.45	MEX 53*
301	120	20	0.17	27	0.23	MEX 54*

Table 25e

Deep-Hard-Accel-Mag 7.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
54	350	340	0.97	450	1.29	CHL 35
54	224	340	1.52	450	2.01	CHL 36
68	161	290	1.80	385	2.39	CHL 32*
68	176	290	1.65	385	2.19	CHL 31*
71	656	285	0.43	380	0.58	CHL 11*
71	418	285	0.68	380	0.91	CHL 12*
82	182	250	1.37	380	2.09	AKA 1
130	226	160	0.71	205	0.91	CHL 16*

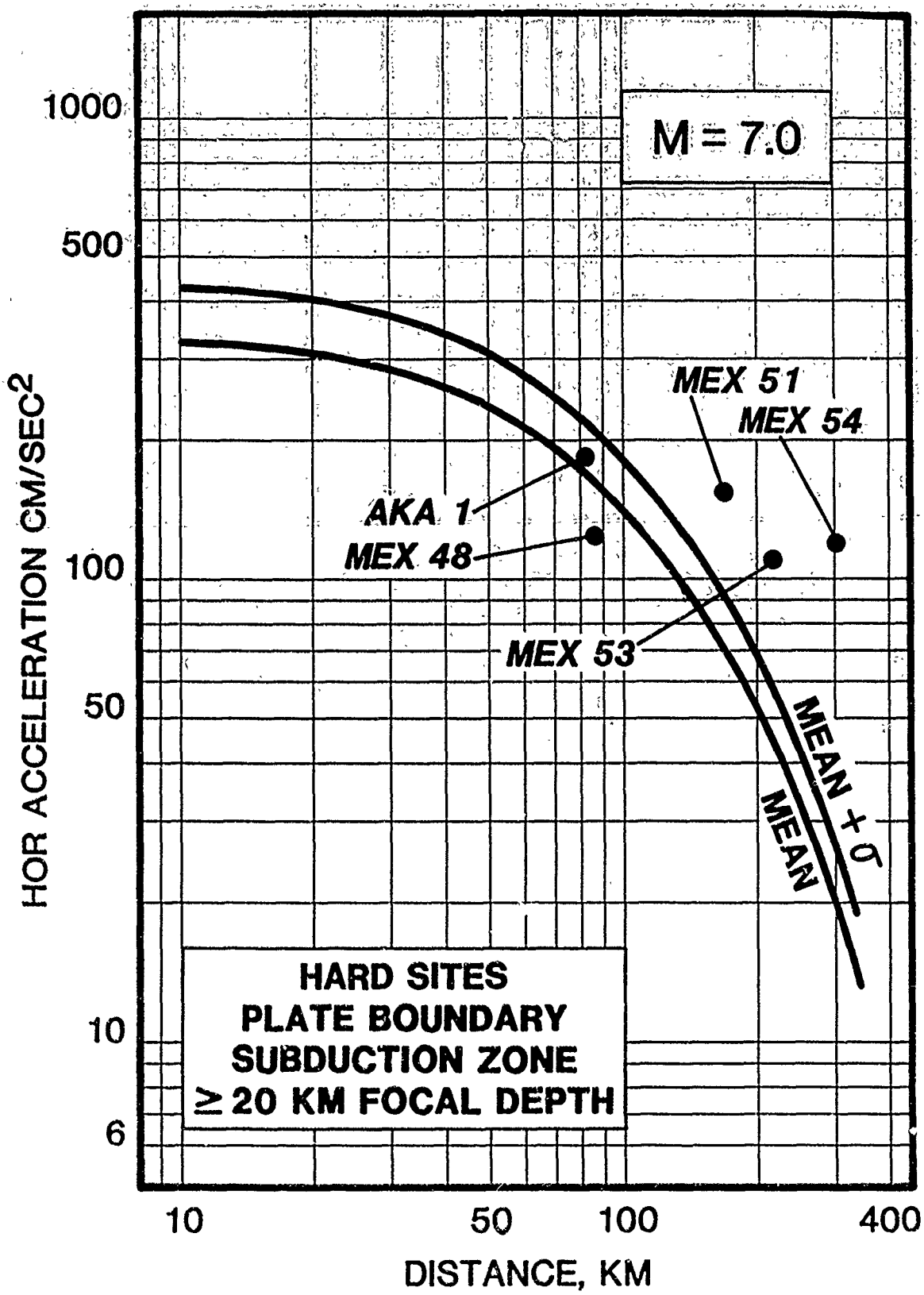


Figure 25d. Accelerograms for acceleration, M = 7.0, and distance from source for deep earthquakes at hard sites. (See Table 25d.)

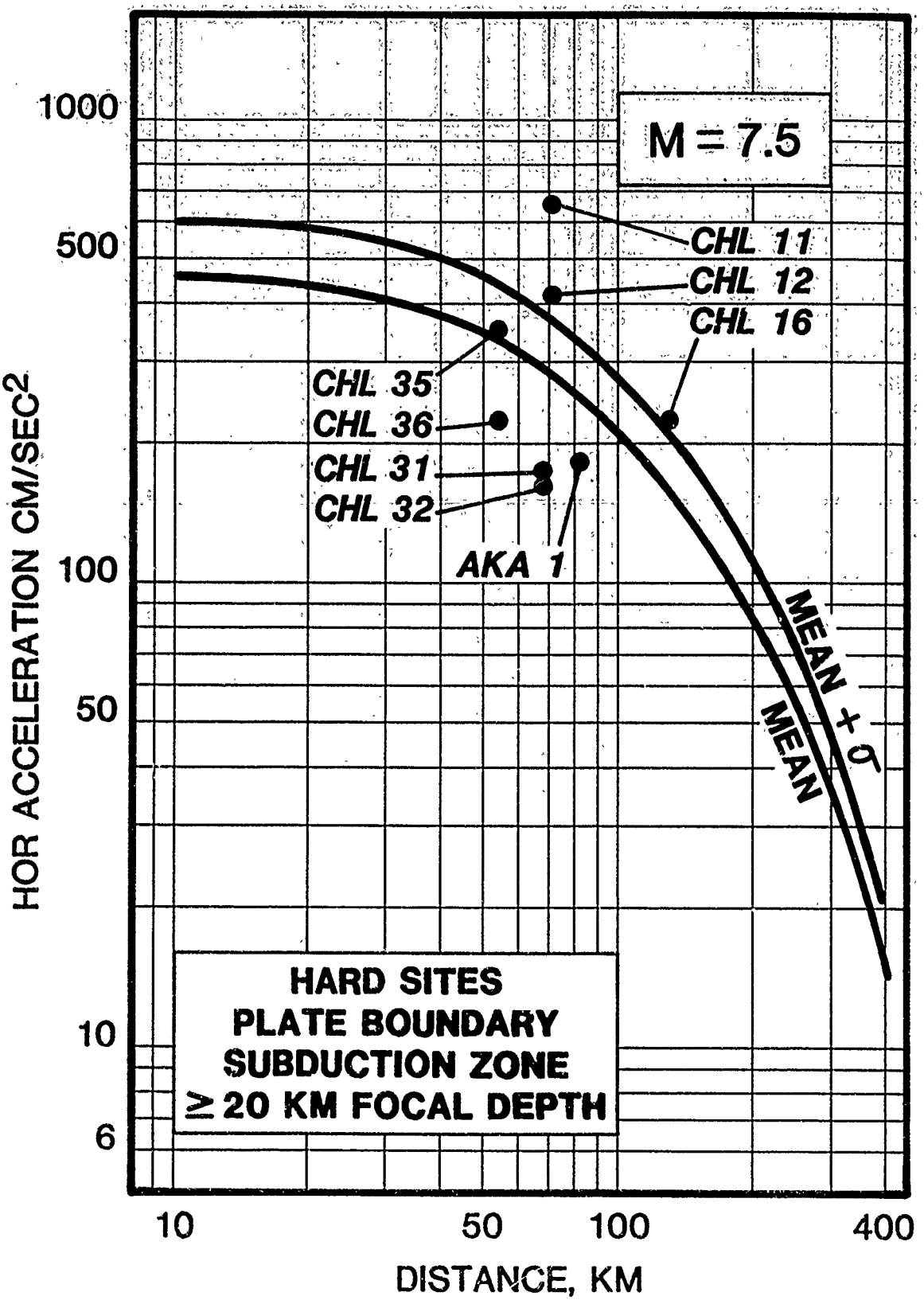


Figure 25e. Accelerograms for acceleration, M = 7.5, and distance from source for deep earthquakes at hard sites. (See Table 25e.)

67. Generic accelerograms for deep event ground motion at hard sites with magnitude and velocity as the parameters follow.

Table 26a

Deep-Hard-Vel-Mag 5.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
31	3.6	4.2	1.17	6.6	1.83	MEX 76*
45	6.64	3.8	0.57	5.7	0.87	MEX 21*
47	10.88	3.7	0.34	5.2	0.48	CHL 40*
47	6.7	3.9	0.58	5.9	0.88	MEX 80*
67	2.9	3.0	0.97	4.2	1.45	MEX 81*
82	3.99	2.5	0.62	3.7	0.92	MEX 44*
104	4.4	2.0	0.45	3.0	0.68	MEX 82*
104	4.1	2.0	0.49	3.0	0.73	MEX 83*

Table 26b

Deep-Hard-Vel-Mag 6.0

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
31	3.6	6.7	1.86	10.0	2.78	MEX 76*
44	11.46	5.8	0.50	8.7	0.76	MEX 18
44	10.63	5.8	0.55	8.7	0.81	MEX 19
45	6.44	5.8	0.90	8.7	1.35	MEX 21*
47	6.7	5.7	0.85	8.3	1.24	MEX 80*
67	2.9	4.4	1.52	6.5	2.24	MEX 81*
104	4.4	2.9	0.66	4.0	0.91	MEX 82*
104	4.1	2.9	0.71	4.0	0.98	MEX 83*

Table 26c

Deep-Hard-Vel-Mag 6.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
50	11.9	8.8	0.74	13.0	1.09	MEX 66*
86	11.0	6.0	0.55	8.8	0.80	MEX 48*
219	6.0	1.4	0.23	2.0	0.33	MEX 53*

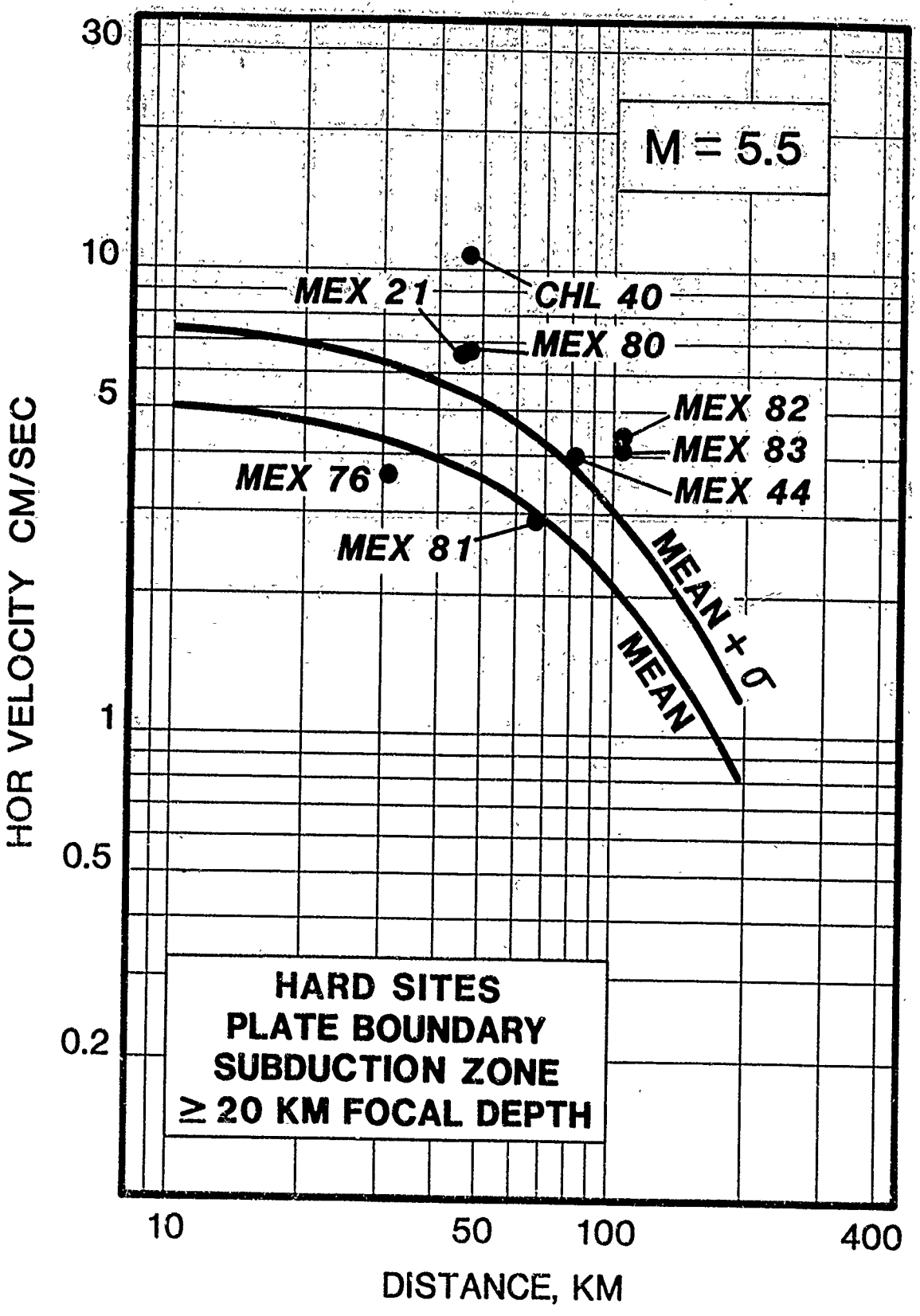


Figure 26a. Accelerograms for velocity, M = 5.5, and distance from source for deep earthquakes at hard sites. (See Table 26a.)

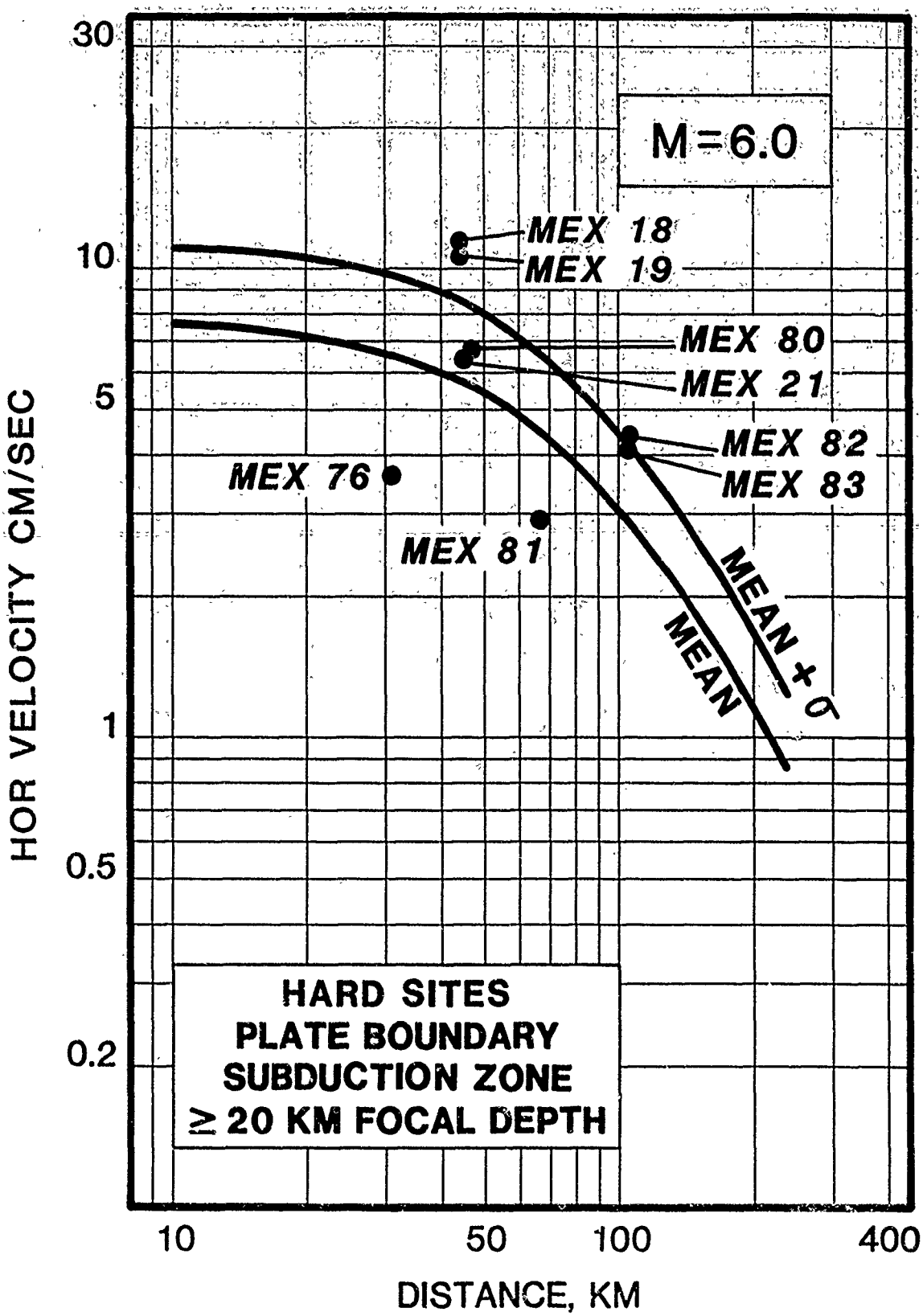


Figure 26b. Accelerograms for velocity, M = 6.0, and distance from source for deep earthquakes at hard sites. (See Table 26b.)

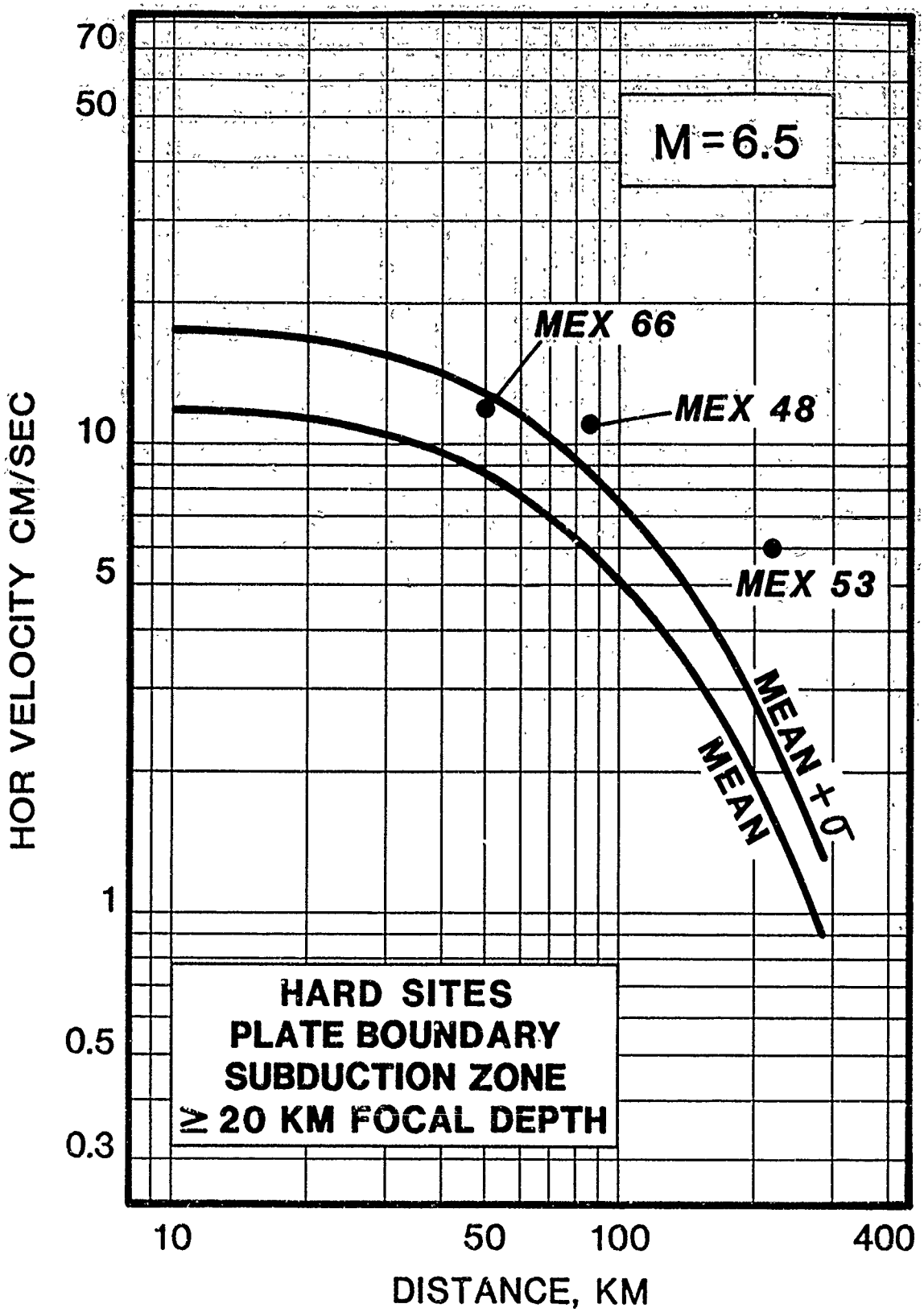


Figure 26c. Accelerograms for velocity, M = 6.5, and distance from source for deep earthquakes at hard sites. (See Table 26c.)

Table 26d

Deep-Hard-Vel-Mag 7.0

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
82	8.0	9.7	1.21	14.0	1.75	AKA 1
86	11.0	9.6	1.15	13.5	1.23	MEX 48*
219	6.0	2.1	0.35	3.0	0.50	MEX 53*

Table 26e

Deep-Hard-Vel-Mag 7.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
82	8.0	14.0	1.75	21.0	2.62	AKA 1
130	12.41	10.0	0.81	14.0	1.13	CHL 16*

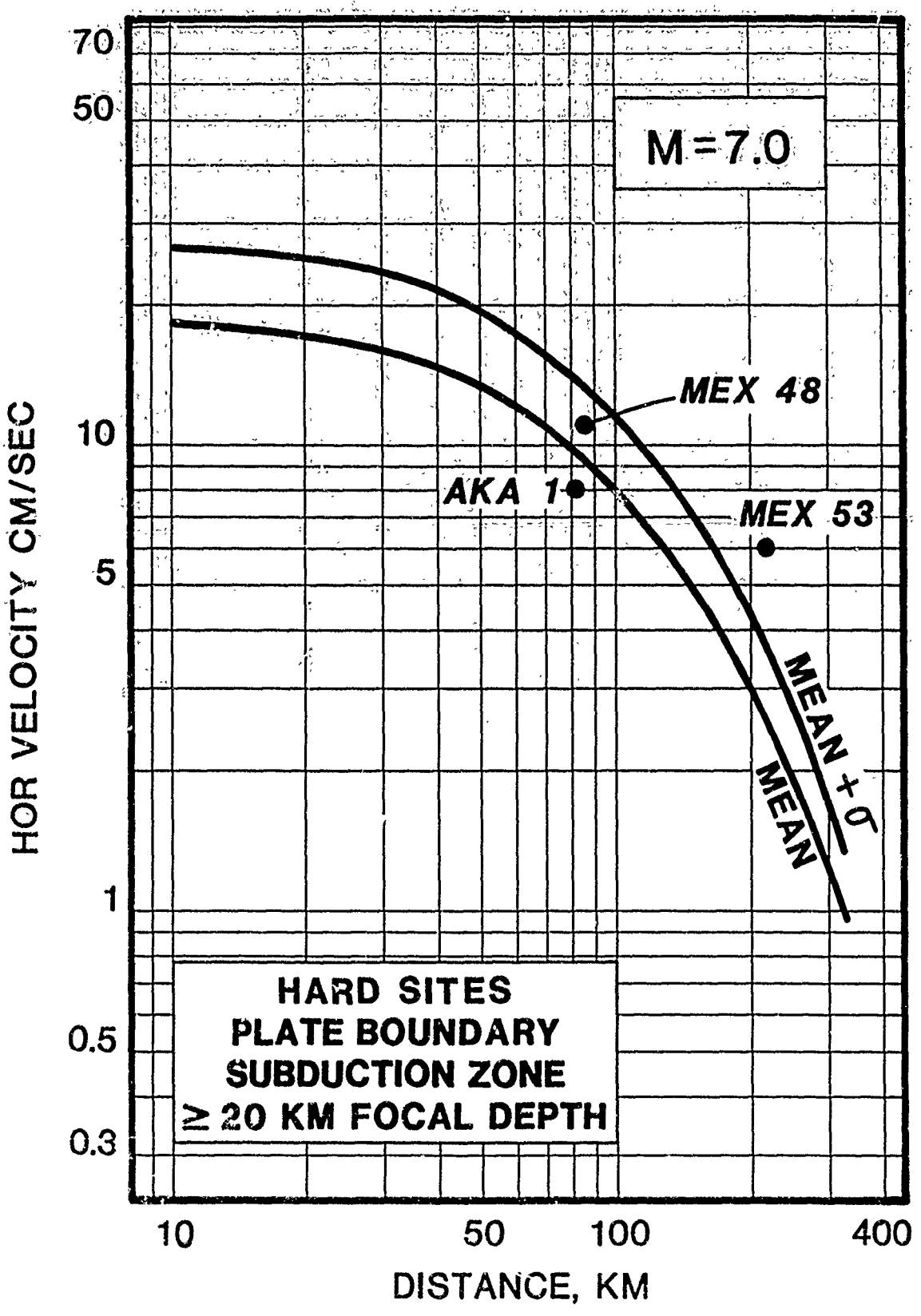


Figure 26d. Accelerograms for velocity, M = 7.0, and distance from source for deep earthquakes at hard sites. (See Table 26d.)

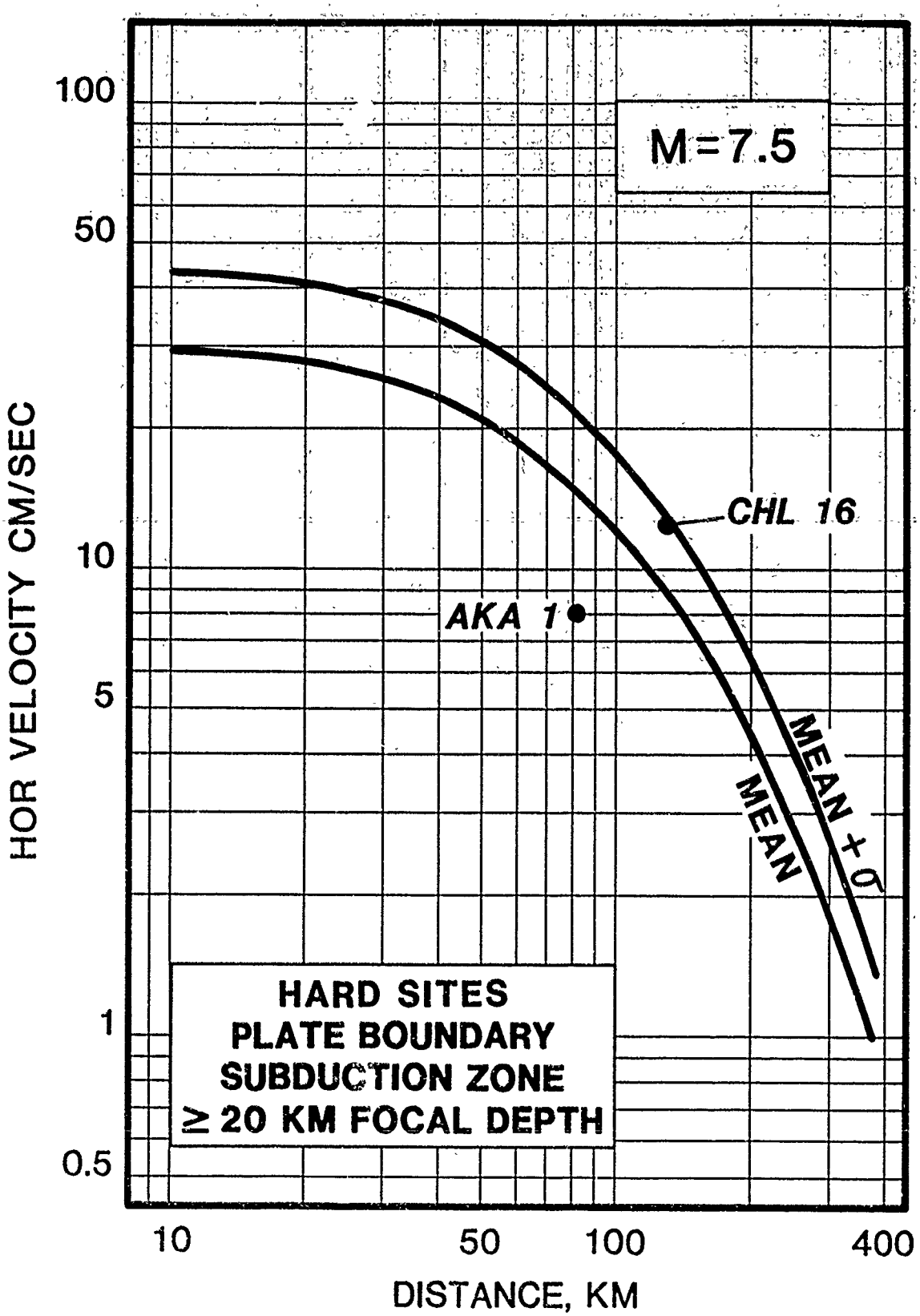


Figure 26e. Accelerograms for velocity, M = 7.5, and distance from source for deep earthquakes at hard sites. (See Table 26e.)

68. Generic accelerograms for deep event ground motion at hard sites with magnitude and duration as the parameters follow.

Table 27a

Deep-Hard-Dur-Mag 5.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
25	1.2	1.3	+0.1	2.3	+1.1	MEX 87*
31	6.1	1.4	-4.7	2.4	-3.7	MEX 76*
45	6.8	1.6	-5.2	2.8	-4.0	MEX 20*
45	6.7	1.6	-5.1	2.8	-3.9	MEX 21*
47	4.2	1.6	-2.6	2.8	-1.4	MEX 80*
67	2.8	1.8	-1.0	3.1	+0.3	MEX 81*
82	0.9	1.9	+1.0	3.3	+2.4	MEX 44*
104	6.0	2.1	-3.9	3.7	-2.3	MEX 82*
104	5.6	2.1	-3.5	3.7	-1.9	MEX 83*

Table 27b

Deep-Hard-Dur-Mag 6.0

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
31	6.1	2.3	-3.8	3.8	-2.3	MEX 76*
45	6.8	2.6	-4.2	4.7	-2.1	MEX 20*
45	6.7	2.6	-4.1	4.7	+2.0	MEX 21*
47	4.2	2.7	-1.5	4.3	+0.1	MEX 80*
67	2.8	2.9	+0.1	5.2	+2.4	MEX 81*
104	6.0	3.3	-2.7	6.0	0.0	MEX 82*
104	5.6	3.3	-2.3	6.0	+0.4	MEX 83*

Table 27c

Deep-Hard-Dur-Mag 6.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
50	11.5	4.3	-7.2	7.8	-3.7	MEX 66*
169	20.0	6.2	-13.8	11.5	-8.5	MEX 51*
219	9.5	7.0	-2.5	12.0	+2.5	MEX 53*
301	13.0	7.8	-5.2	13.0	0.0	MEX 54*

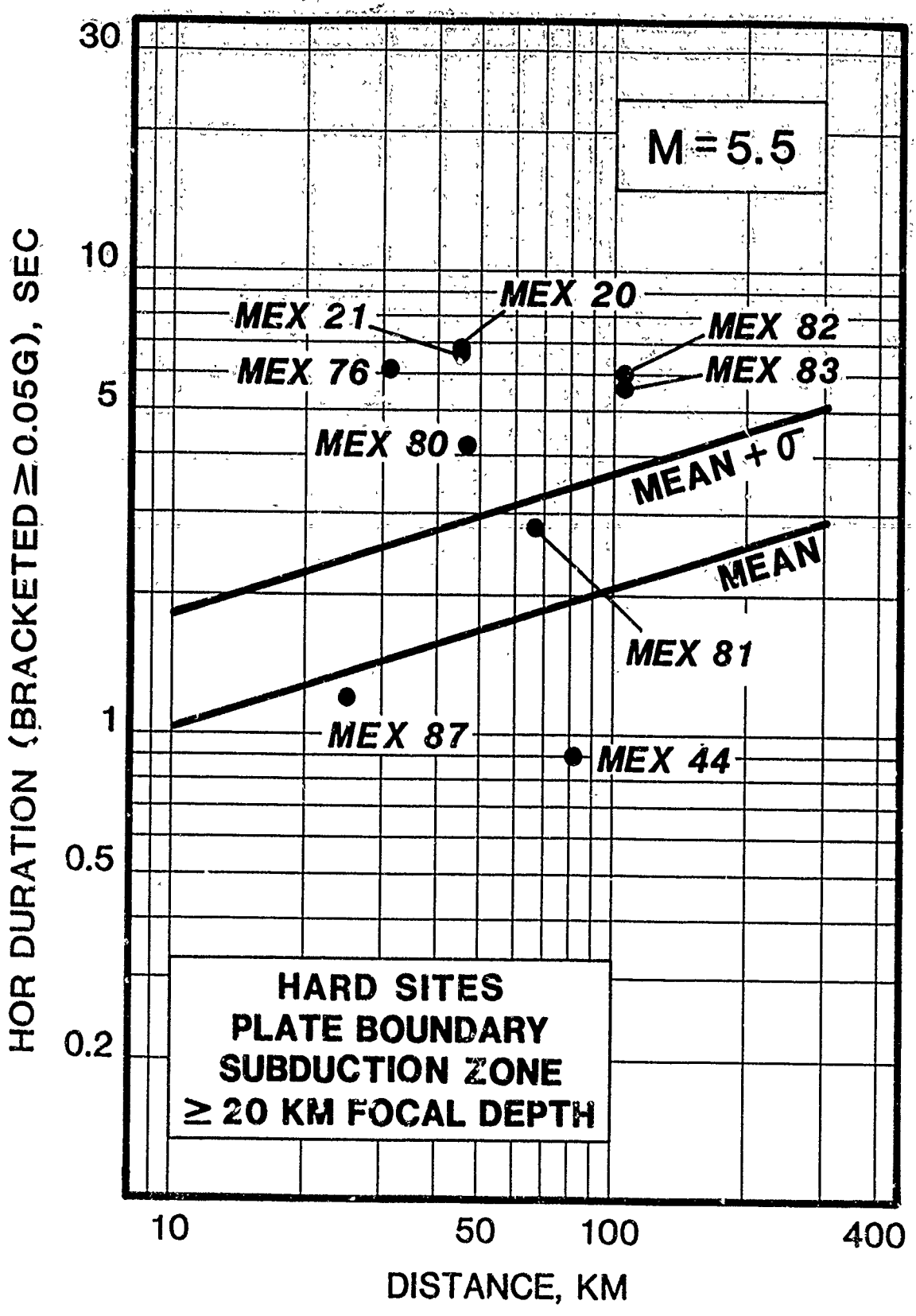


Figure 27a. Accelerograms for duration, M = 5.5, and distance from source for deep earthquakes at hard sites. (See Table 27a.)

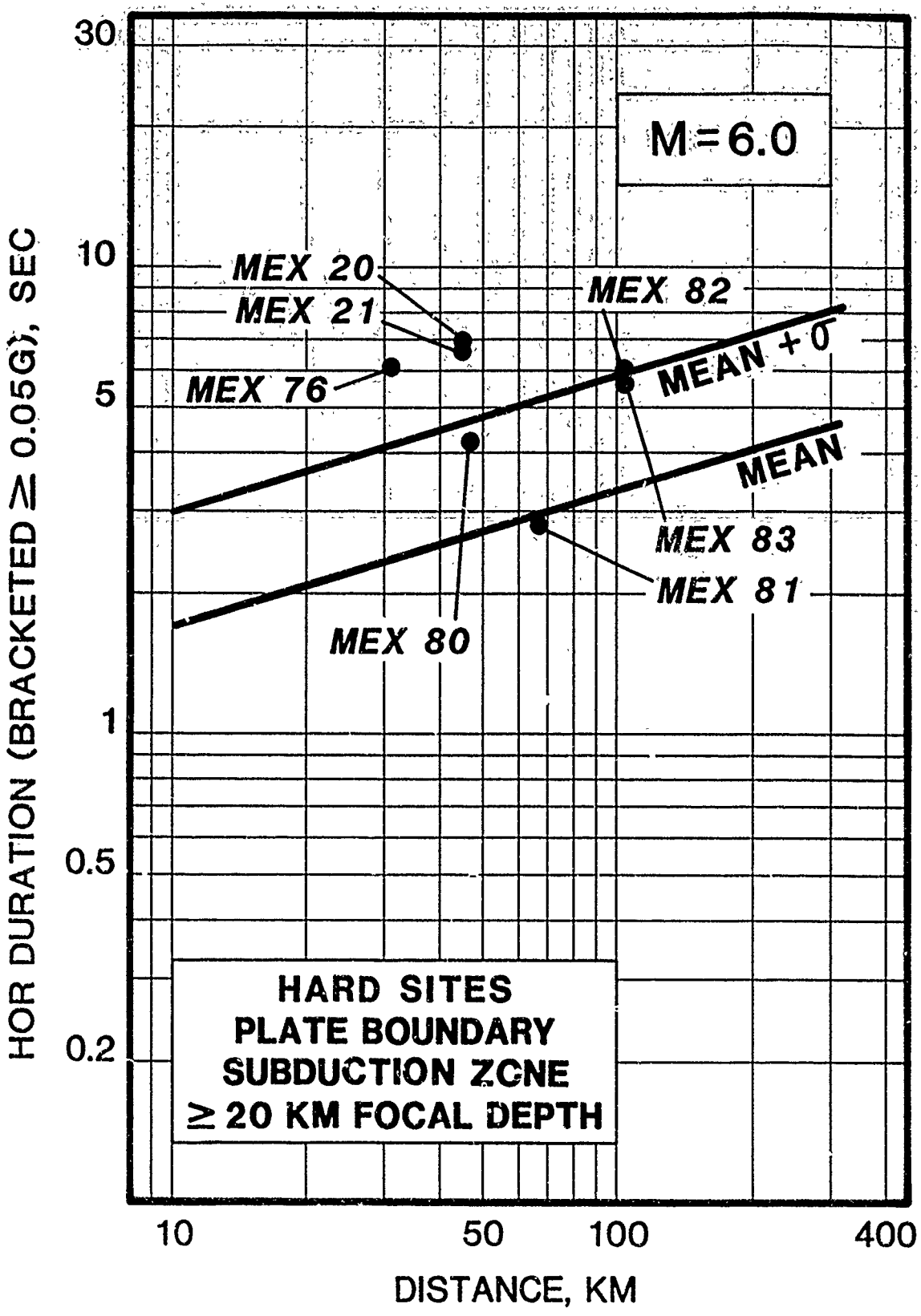


Figure 27b. Accelerograms for duration, M = 6.0, and distance from source for deep earthquakes at hard sites. (See Table 27b.)

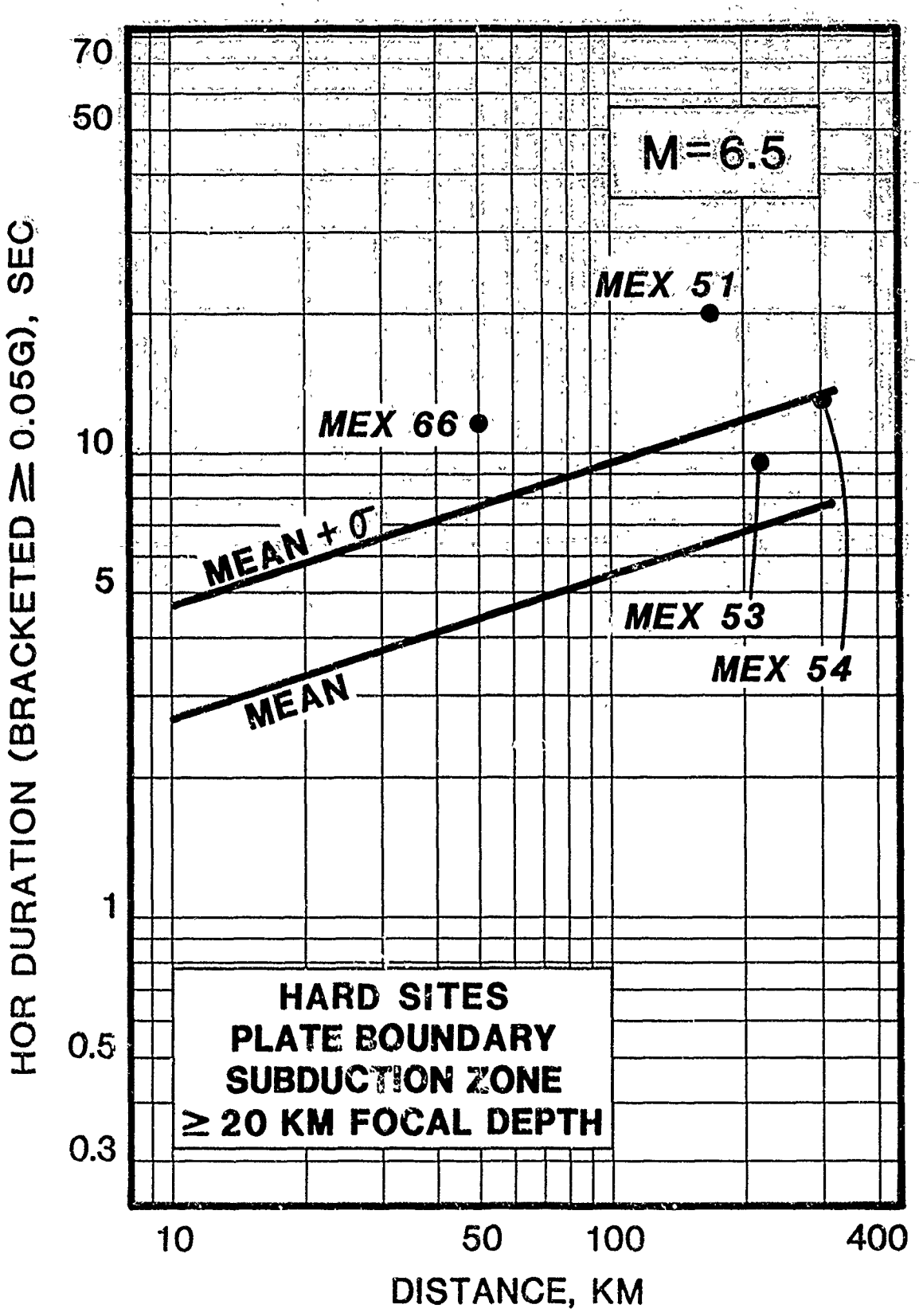


Figure 27c. Accelerograms for duration, M = 6.5, and distance from source for deep earthquakes at hard sites. (See Table 27c.)

Table 27d

Deep-Hard-Dur-Mag 7.0

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
82	8.1	7.5	-0.6	15.1	+7.0	AKA 1
169	20.0	10.5	-9.5	18.0	-2.0	MEX 51*
219	9.5	12.0	+2.5	20.5	+11.0	MEX 53*
301	13.0	14.0	+1.0	22.0	+9.0	MEX 54*

Table 27e

Deep-Hard-Dur-Mag 7.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
82	8.1	14.0	+5.9	25.0	+16.9	AKA 1

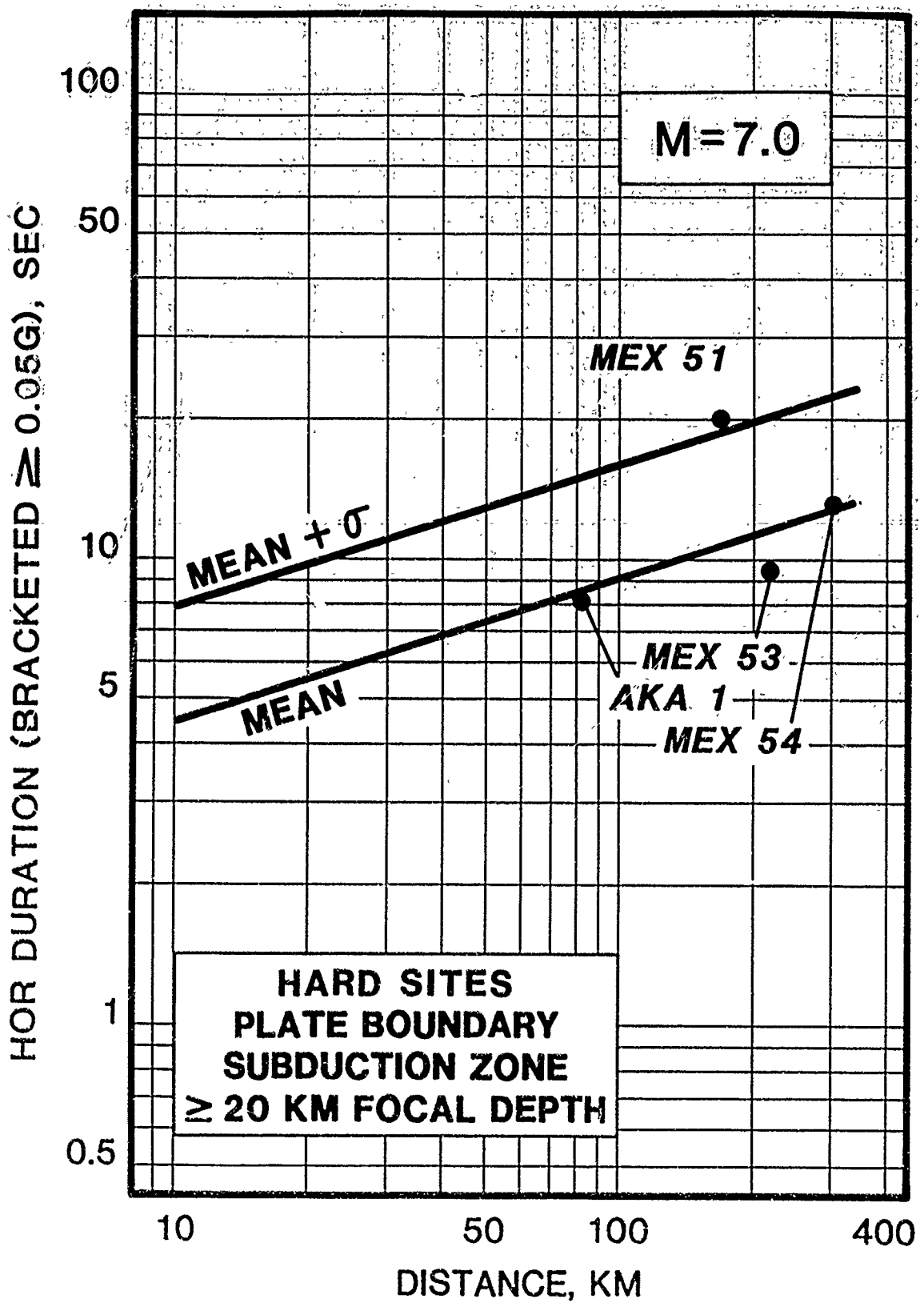


Figure 27d. Accelerograms for duration, M = 7.0, and distance from source for deep earthquakes at hard sites. (See Table 27d.)

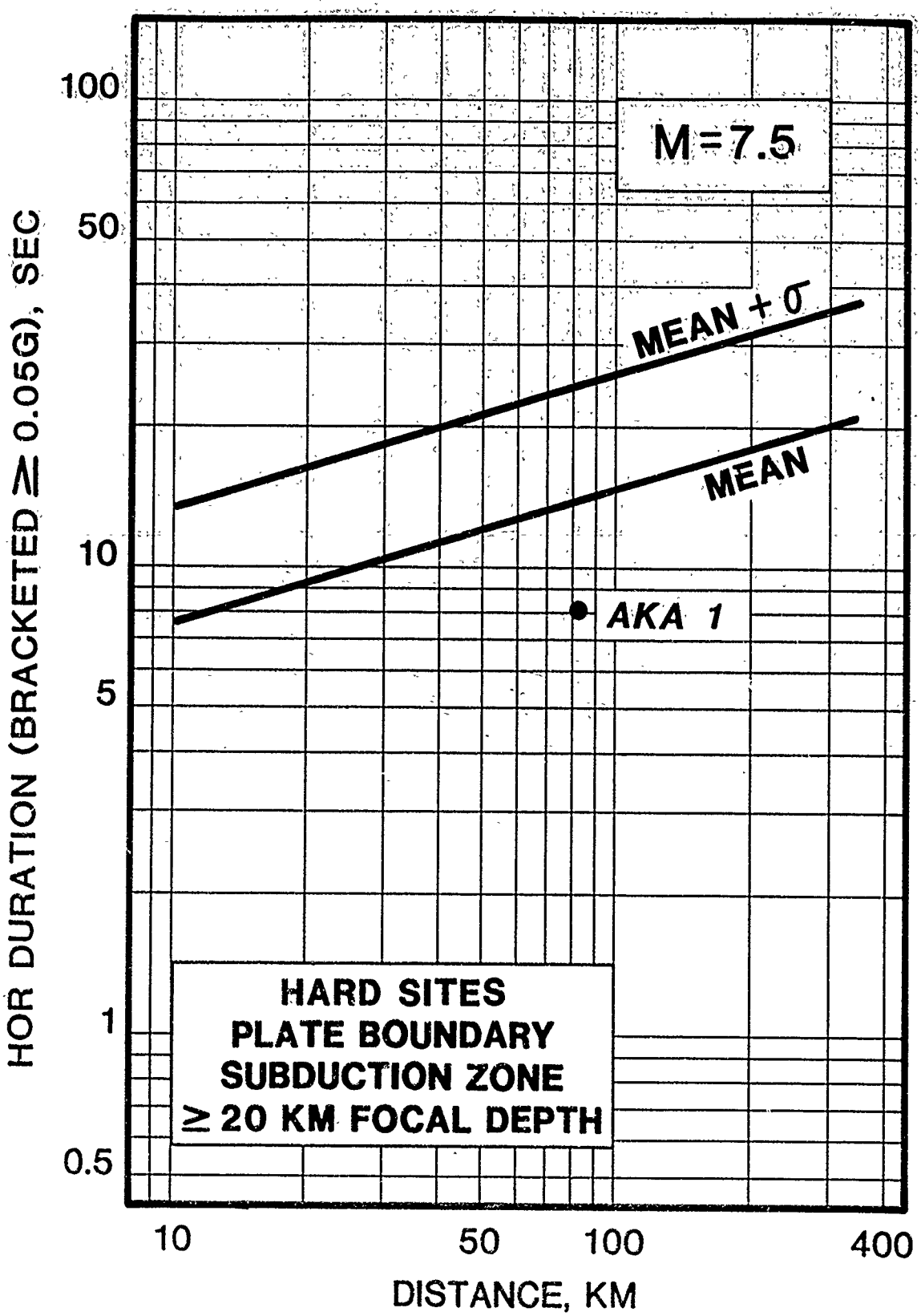


Figure 27e. Accelerograms for duration, M = 7.5, and distance from source for deep earthquakes at hard sites. (See Table 27e.)

PART XIV: TABLES AND FIGURES FOR MAGNITUDE-RELATED PEAK GROUND MOTION FOR DEEP EVENTS ON SOFT SITES

69. Generic accelerograms for deep event ground motion at soft sites with magnitude and acceleration as the parameters follow.

Table 28a

Deep-Soft-Accel-Mag 5.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
[NO DATA]						

Table 28b

Deep-Soft-Accel-Mag 6.0

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
239	269	12	--	20	--	PER 1
239	180	12	--	20	--	PER 2

Table 28c

Deep-Soft-Accel-Mag 6.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
77	194	130	0.67	165	0.85	WAS 5
77	134	130	0.97	165	1.23	WAS 6
142	156	68	0.44	90	0.58	CHL 1
239	269	25	-	40	--	PER 1
239	180	25	--	40	--	PER 2

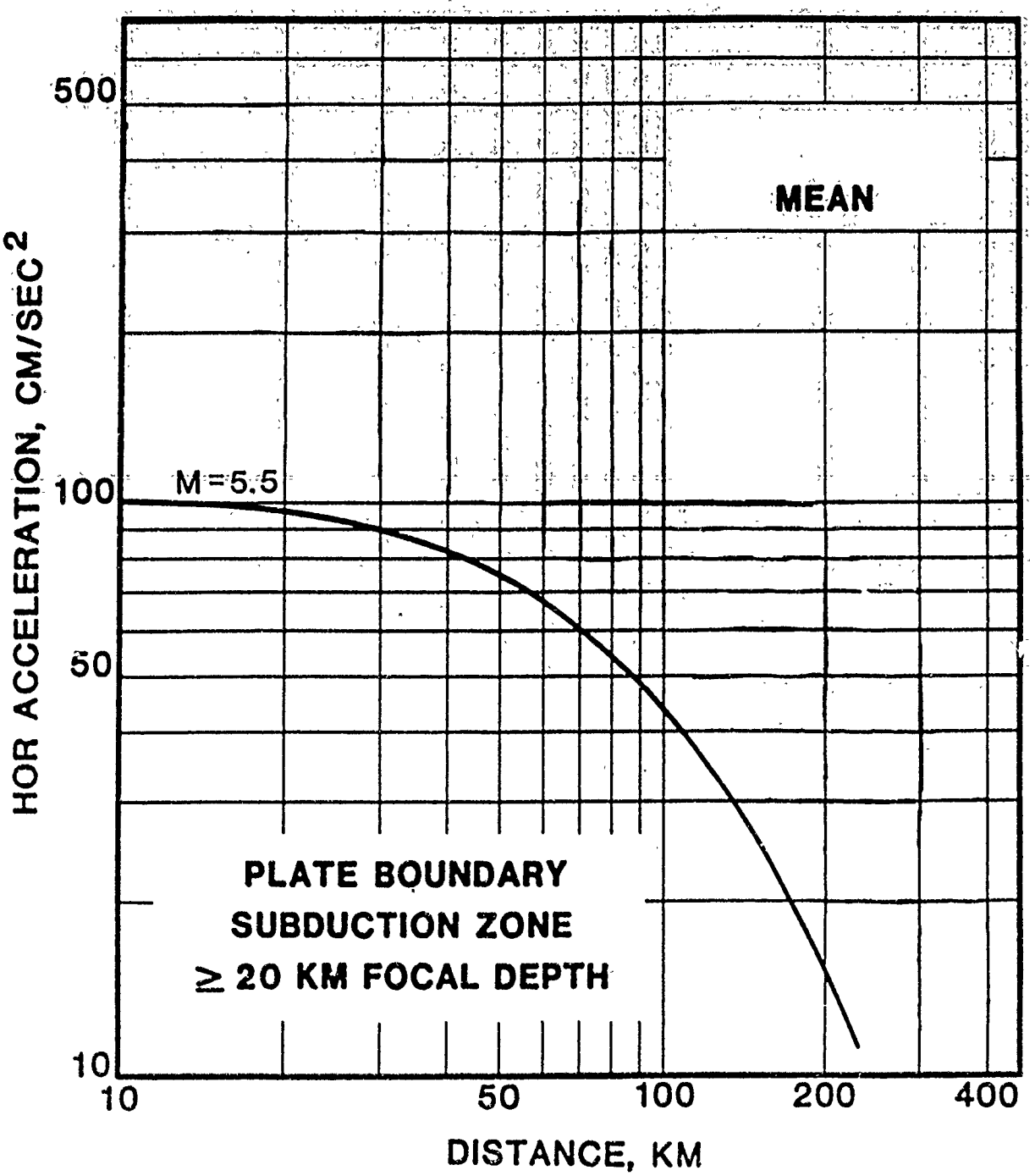


Figure 28a. Accelerograms for acceleration, M = 5.5, and distance from source for deep earthquakes at soft sites. (See Table 28a.)

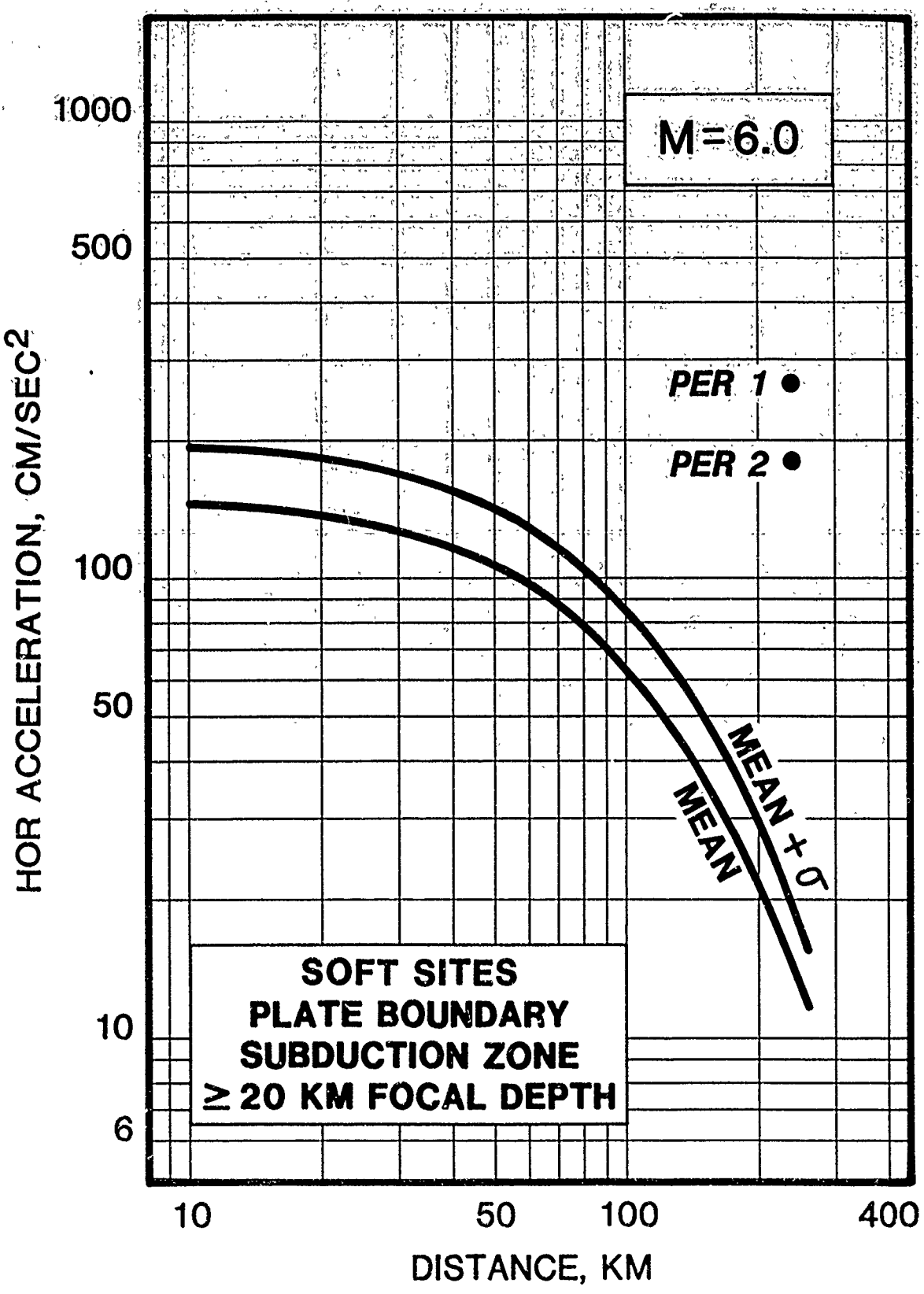


Figure 28b. Accelerograms for acceleration, M = 6.0, and distance from source for deep earthquakes at soft sites. (See Table 28b.)

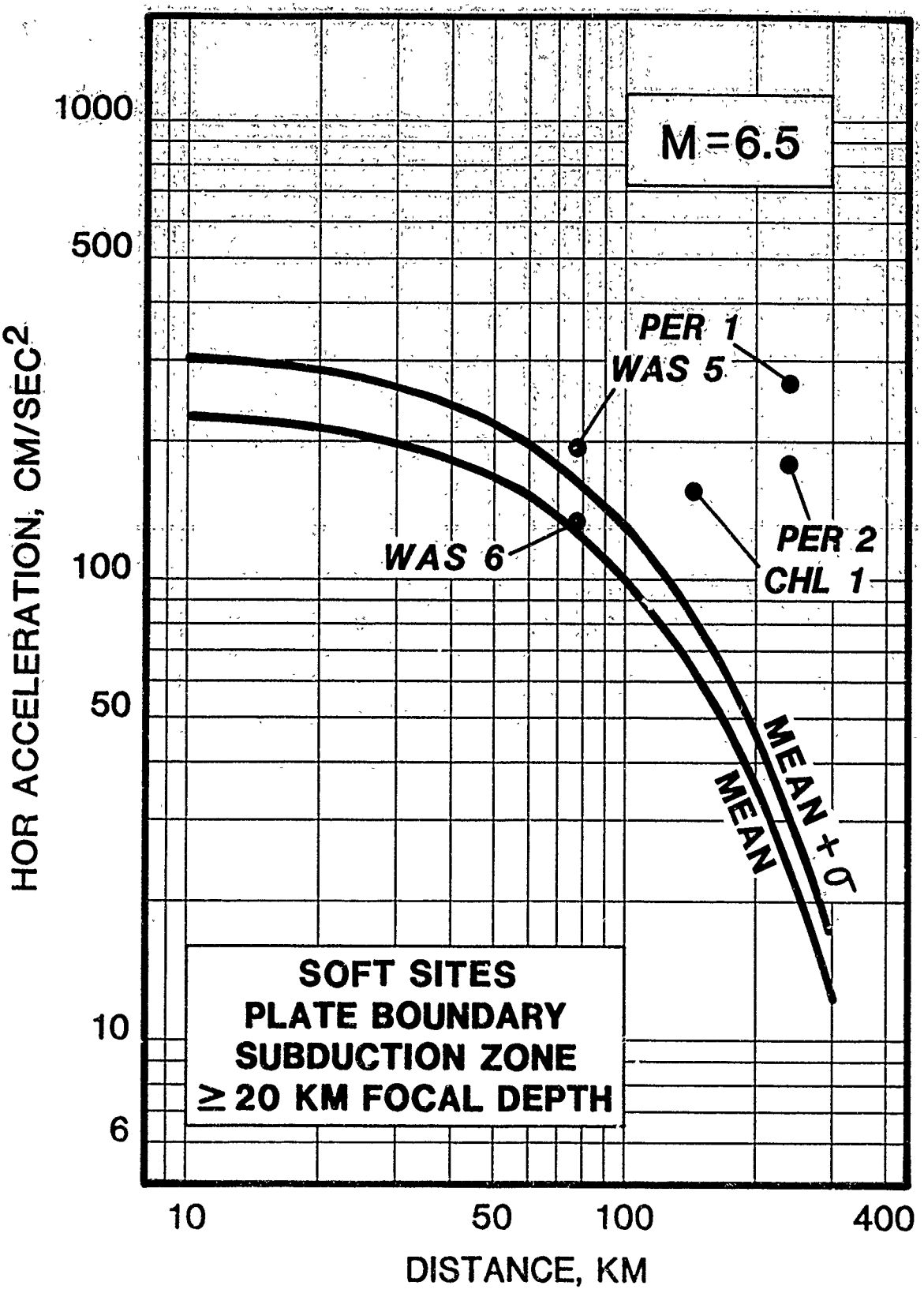


Figure 28c. Accelerograms for acceleration, M = 6.5, and distance from source for deep earthquakes at soft sites. (See Table 28c.)

Table 28d

Deep-Soft-Accel-Mag 7.0

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
77	194	172	0.89	222	2.36	WAS 5
77	134	172	1.28	222	1.66	WAS 6
142	156	86	0.55	100	0.64	CHL 1
199	202	53	0.26	63	0.31	ROM 1
199	175	53	0.30	63	0.36	ROM 2

Table 28e

Deep-Soft-Accel-Mag 7.5

Hypo km	Record Gal	Mean Gal	Scale x	Plus Sigma	Scale X	I.D. No.
68	288	290	1.00	385	1.34	CHL 2
68	160	290	1.81	385	2.41	CHL 3
72	275	285	1.04	365	1.33	WAS 1
72	162	285	1.76	365	2.25	WAS 2
94	67	230	3.43	280	4.18	WAS 3
94	66	230	3.48	280	4.24	WAS 4
144	174	120	0.69	155	0.89	CHL 8
189	168	88	0.52	112	0.67	CHL 29
189	164	88	0.53	112	0.68	CHL 30
199	202	88	0.44	110	0.54	ROM 1
199	175	88	0.50	110	0.63	ROM 2

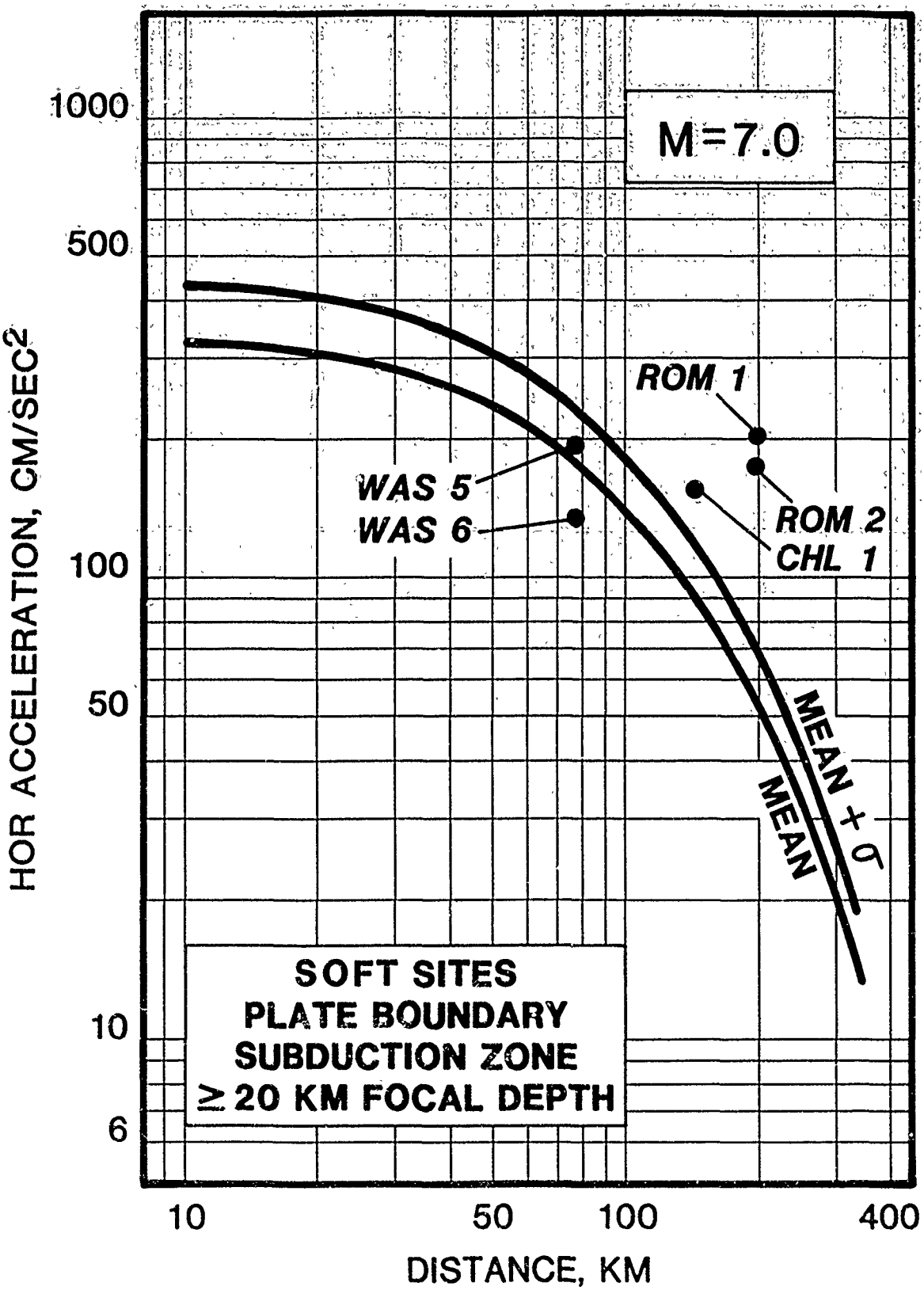


Figure 28d. Accelerograms for acceleration, M = 7.0, and distance from source for deep earthquakes at soft sites. (See Table 28d.)

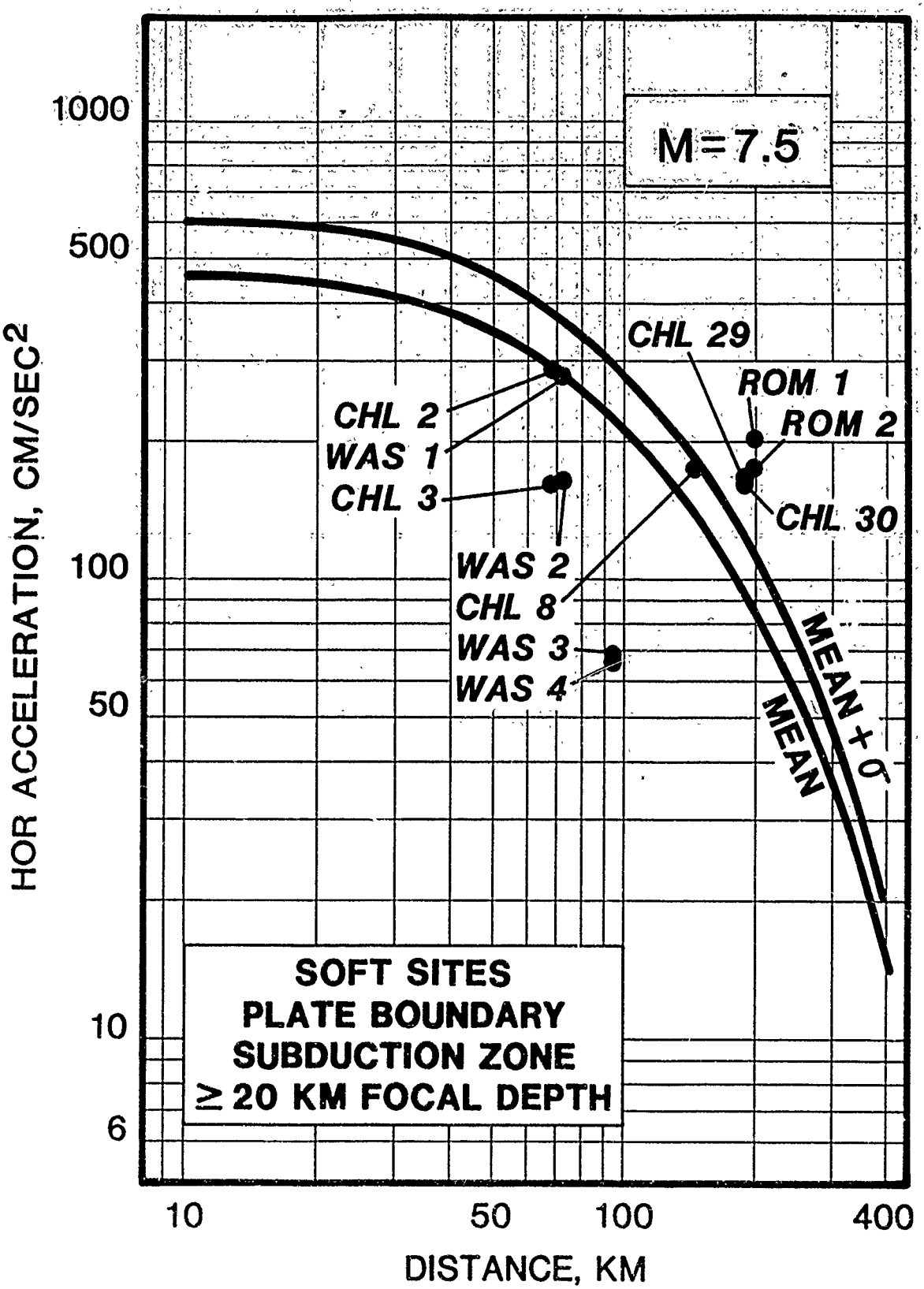


Figure 28e. Accelerograms for acceleration, M = 7.5, and distance from source for deep earthquakes at soft sites. (See Table 28e.)

70. Generic accelerograms for deep event ground motion at soft sites with magnitude and velocity as the parameters follow.

Table 29a

Deep-Soft-Vel-Mag 5.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
[NO DATA]						

Table 29b

Deep-Soft-Vel-Mag 6.0

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
239	21.6	1.5	--	2.6	--	PER 1
239	13.2	1.5	--	2.6	--	PER 2

Table 29c

Deep-Soft-Vel-Mag 6.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
77	12.7	11.1	0.87	18.0	1.42	WAS 5
77	8.0	11.1	1.39	18.0	2.25	WAS 6
142	23.2	5.8	0.25	9.2	0.40	CHL 1
199	32.6	3.6	--	5.9	--	ROM 2
239	21.5	2.5	--	3.5	--	PER 1
239	13.2	2.5	0.19	3.5	0.26	PER 2

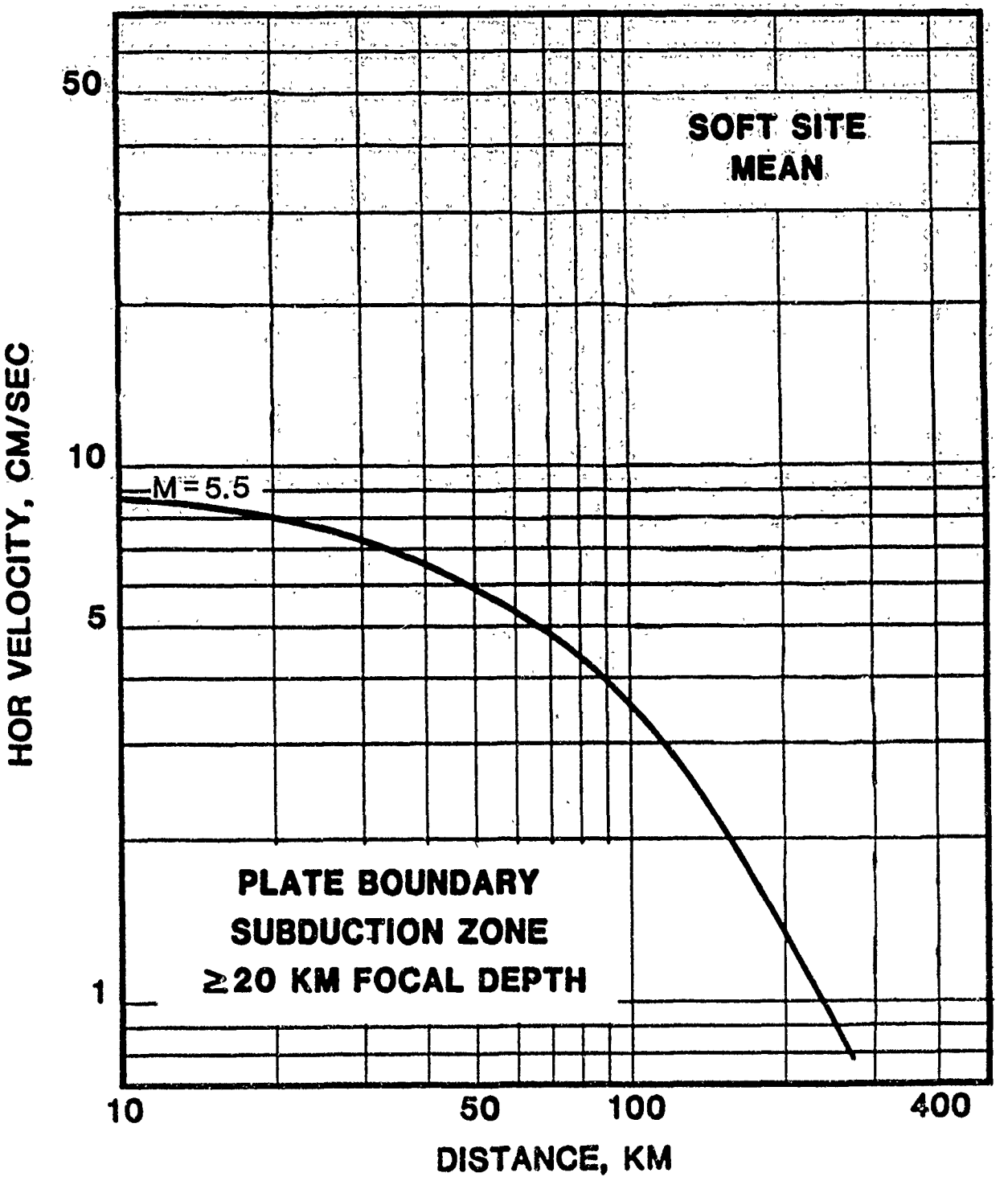


Figure 29a. Accelerograms for velocity, M = 5.5, and distance from source for deep earthquakes at soft sites. (See Table 29a.)

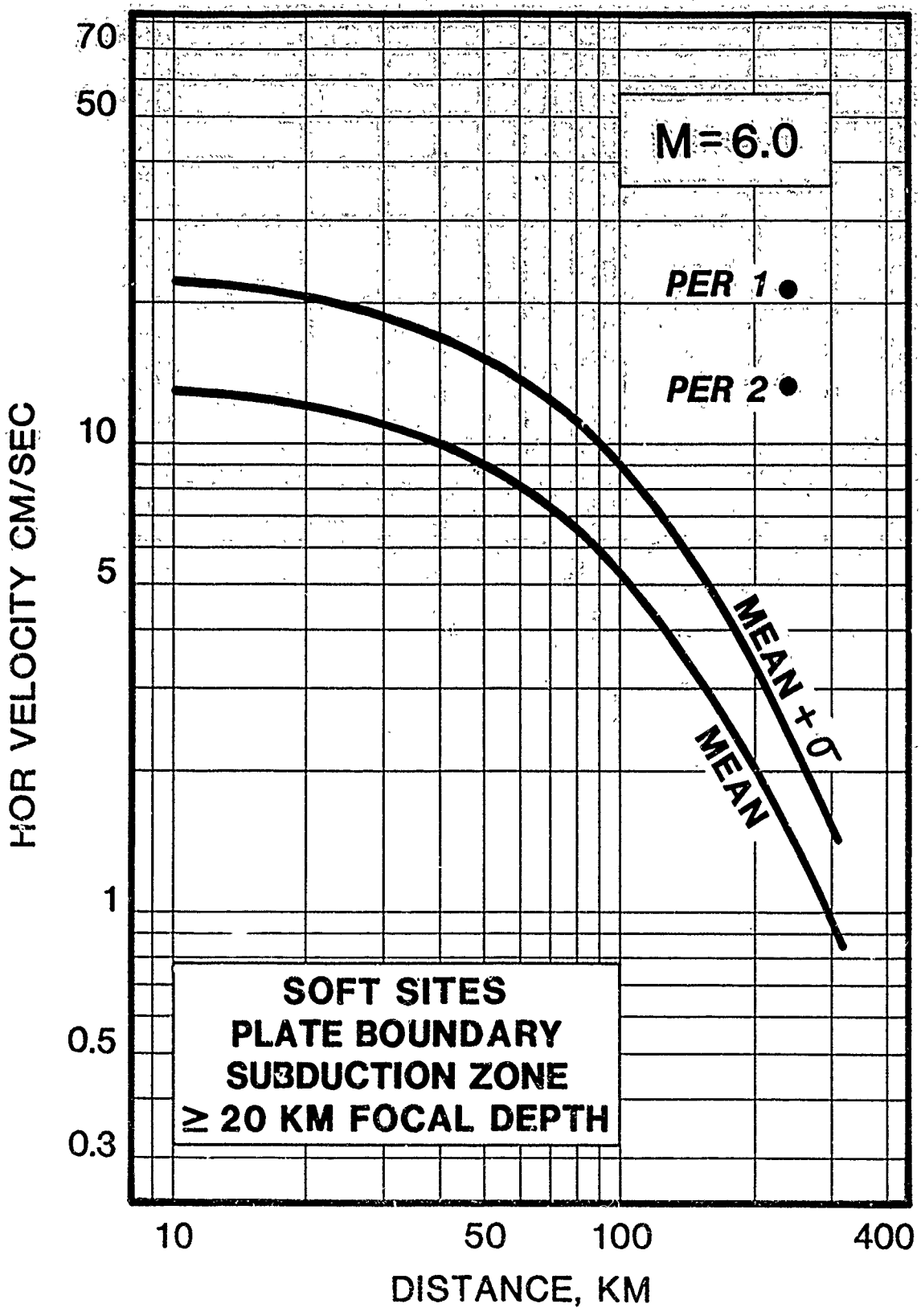


Figure 29b. Accelerograms for velocity, M = 6.0, and distance from source for deep earthquakes at soft sites. (See Table 29b.)

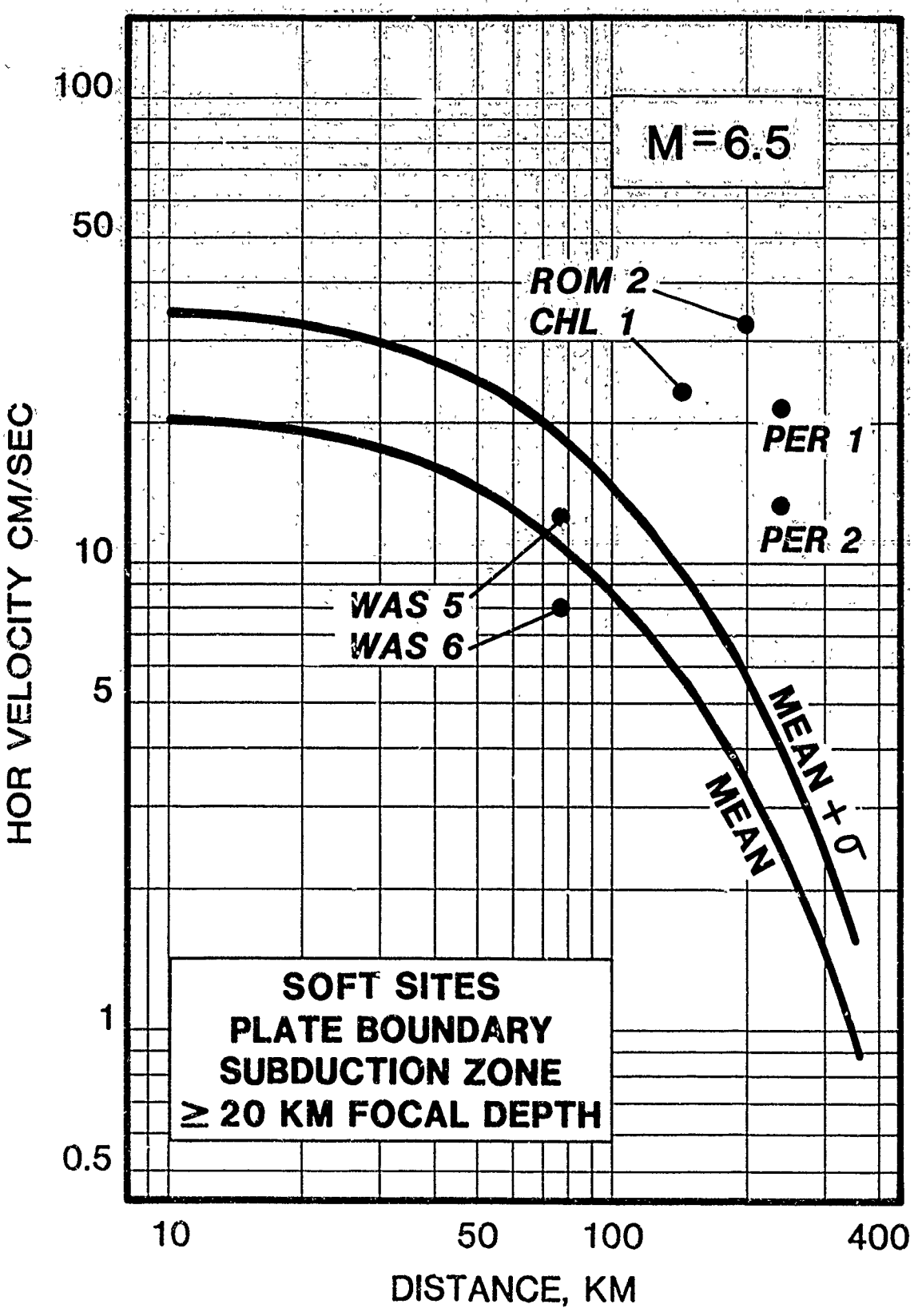


Figure 29c. Accelerograms for velocity, M = 6.5, and distance from source for deep earthquakes at soft sites. (See Table 29c.)

Table 29d

Deep-Soft-Vel-Mag 7.0

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
77	12.7	17.0	1.34	29.0	2.28	WAS 5
77	8.0	17.0	2.12	29.0	3.62	WAS 6
142	23.2	8.6	0.37	14.0	0.60	CHL 1
199	32.6	5.0	--	7.7	0.24	ROM 2

Table 29e

Deep-Soft-Vel-Mag 7.5

Hypo km	Record Vel	Mean Vel	Scale x	Plus Sigma	Scale X	I.D. No.
72	21.4	27.0	1.26	44.0	2.06	WAS 2
72	17.0	27.0	1.59	44.0	2.59	WAS 1
94	7.9	22.0	2.78	34.0	4.30	WAS 4
94	8.2	22.0	2.68	34.0	4.15	WAS 3
147	17.8	12.0	0.67	20.0	1.12	CHL 23
147	16.2	12.0	0.74	20.0	1.23	CHL 24
189	11.9	8.0	0.67	12.5	0.95	CHL 30
189	8.9	8.0	0.90	12.5	1.40	CHL 29
199	32.6	8.0	0.25	13.5	0.41	ROM 2

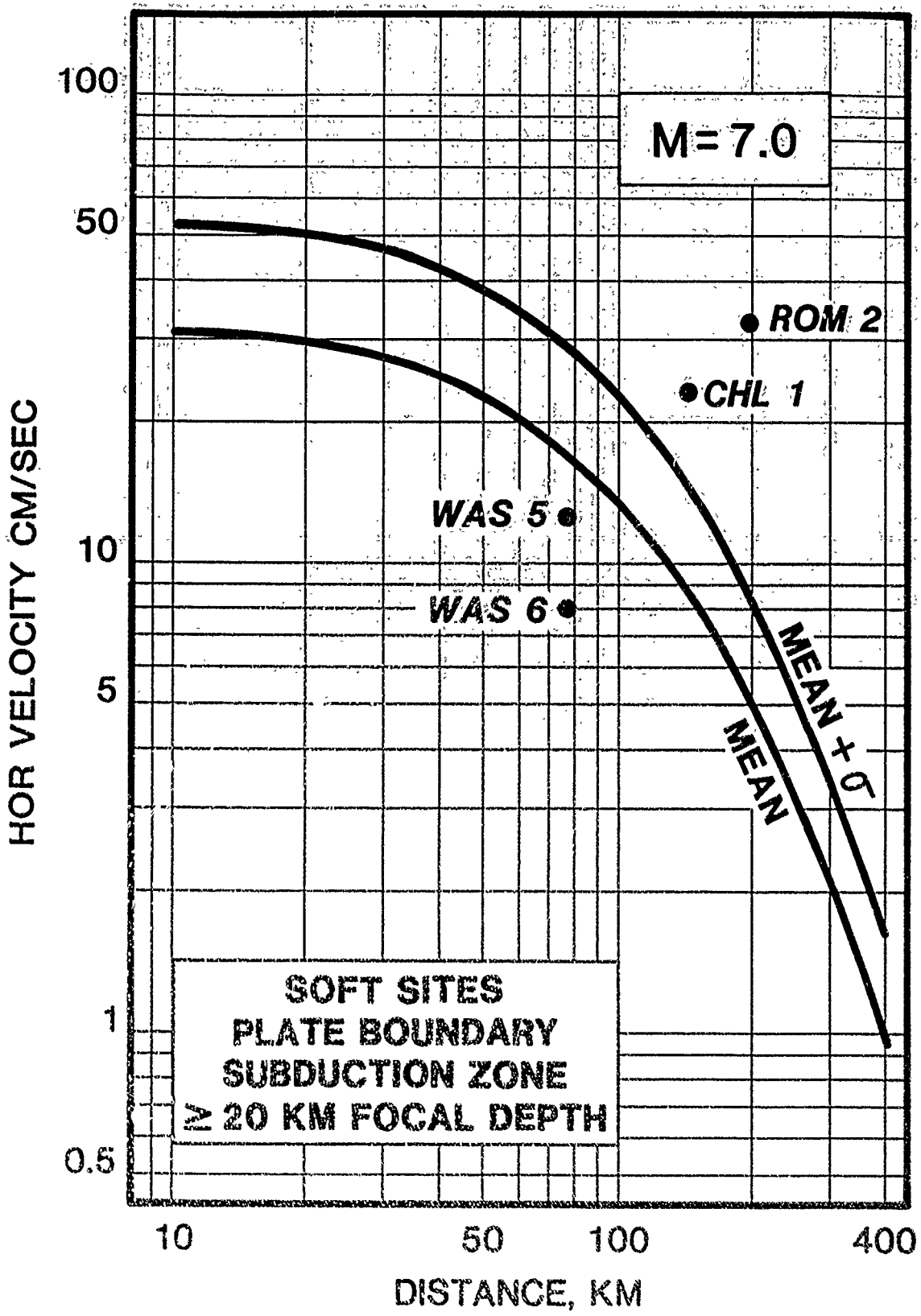


Figure 29d. Accelerograms for velocity, M = 7.0, and distance from source for deep earthquakes at soft sites. (See Table 29d.)

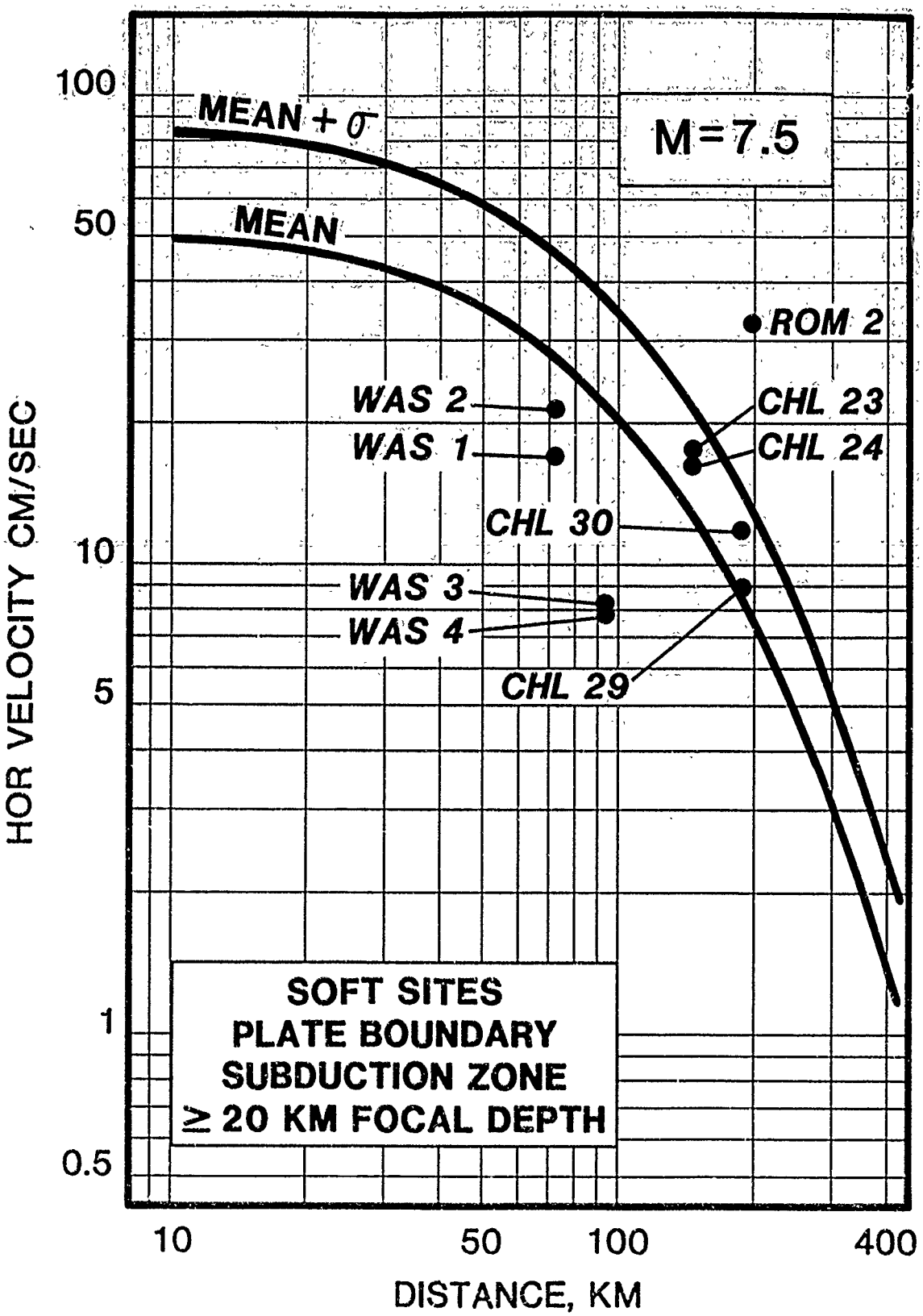


Figure 29e. Accelerograms for velocity, M = 7.5, and distance from source for deep earthquakes at soft sites. (See Table 29e.)

71. Generic accelerograms for deep event ground motion at soft sites with magnitude and duration as the parameters follow.

Table 30a

Deep-Soft-Dur-Mag 5.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
[NO DATA]						

Table 30b

Deep-Soft-Dur-Mag 6.0

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
239	16.0	4.2	-11.8	7.3	-8.7	PER 1
239	12.0	4.2	-7.8	7.3	-4.7	PER 2

Table 30c

Deep-Soft-Dur-Mag 6.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
77	14.0	5.0	-9.0	8.9	-5.1	WAS 5
77	12.4	5.0	-7.4	8.9	-3.5	WAS 6
142	21.3	6.0	-15.3	10.1	-11.2	CHL 1
239	16.0	7.0	-9.0	12.1	-3.9	PER 1
239	12.0	7.0	-5.0	12.1	+0.1	PER 2

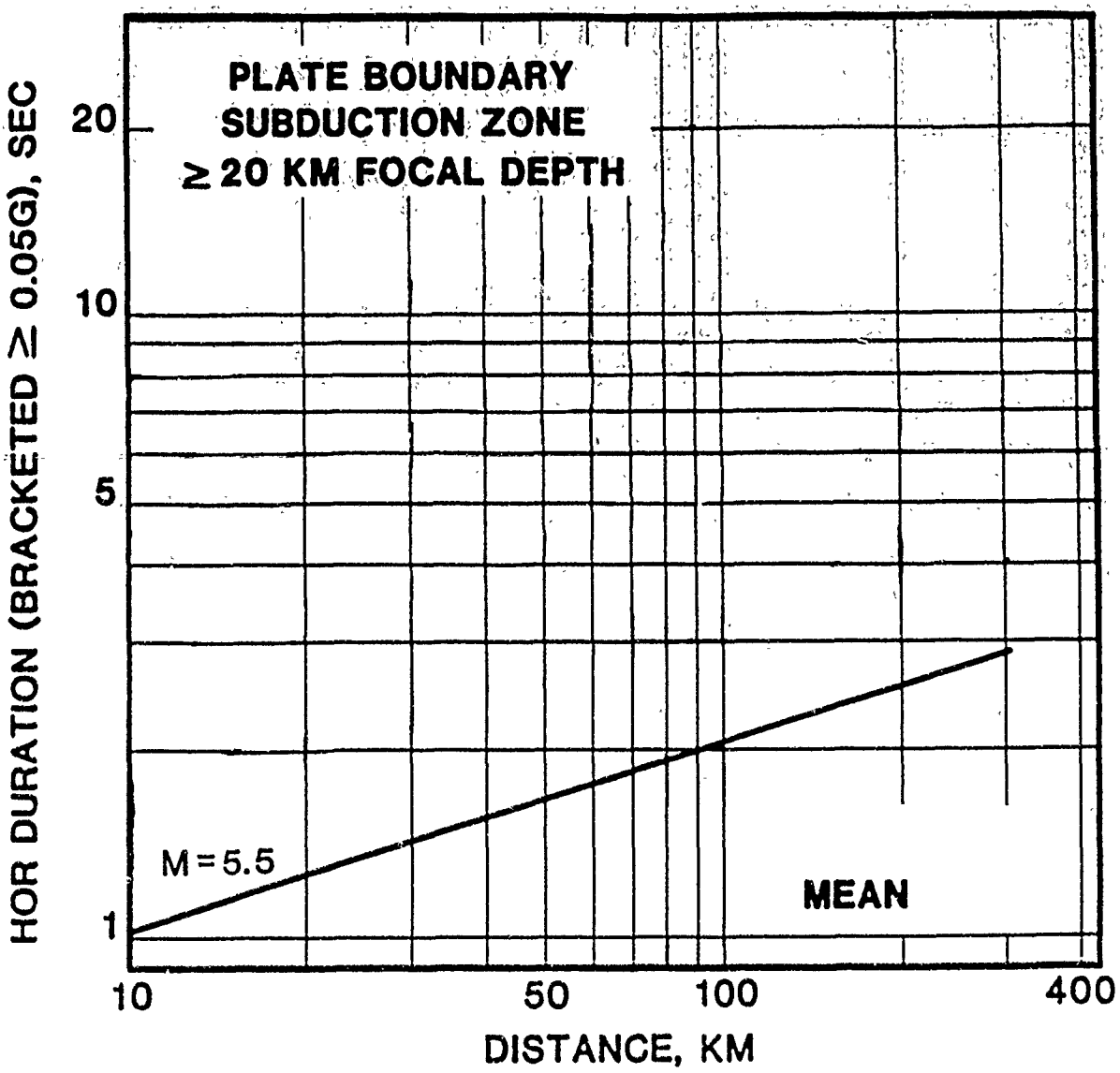


Figure 30a. Accelerograms for duration, M = 5.5, and distance from source for deep earthquakes at soft sites. (See Table 30a.)

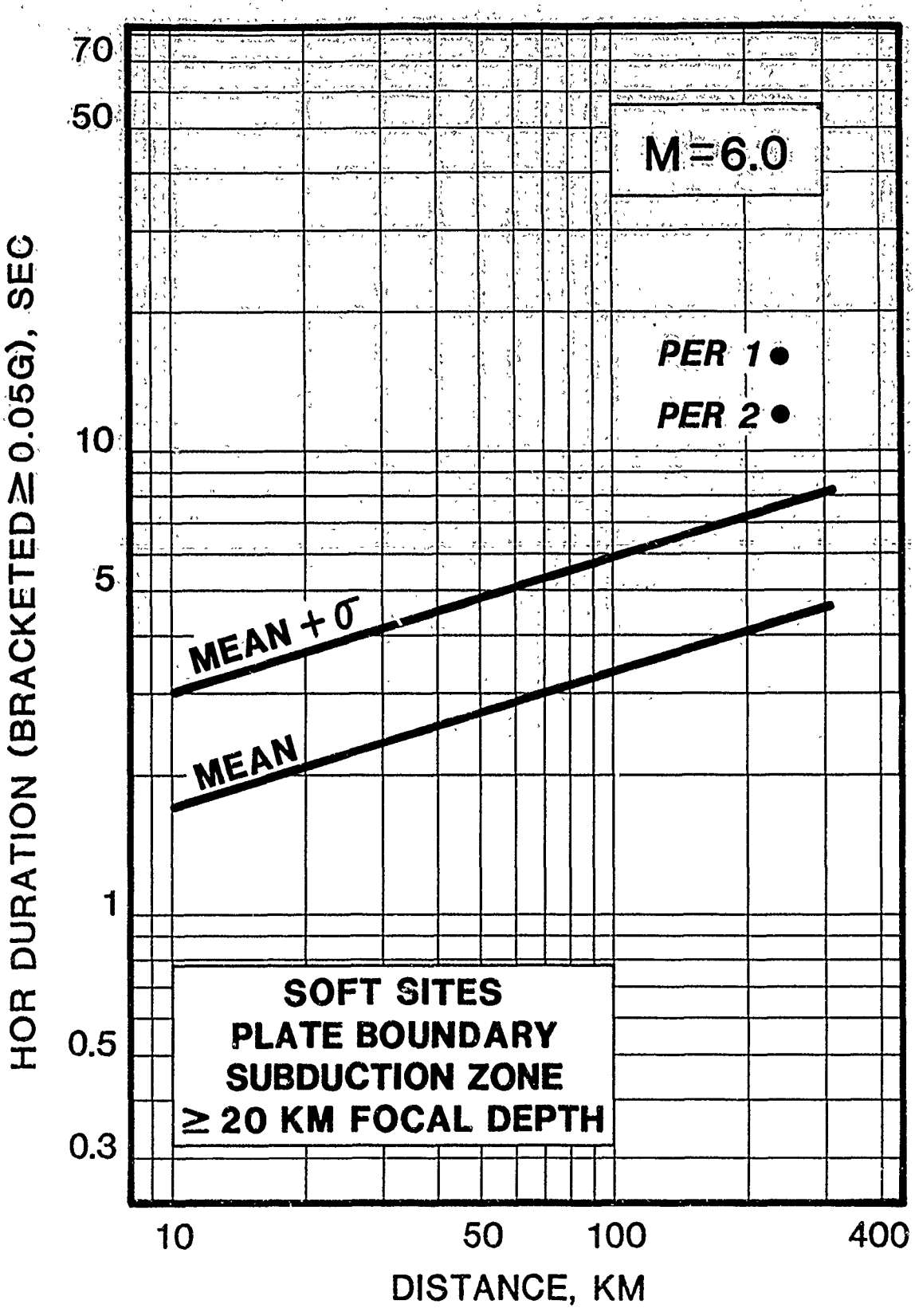


Figure 30b. Accelerograms for duration, M = 6.0, and distance from source for deep earthquakes at soft sites. (See Table 30b.)

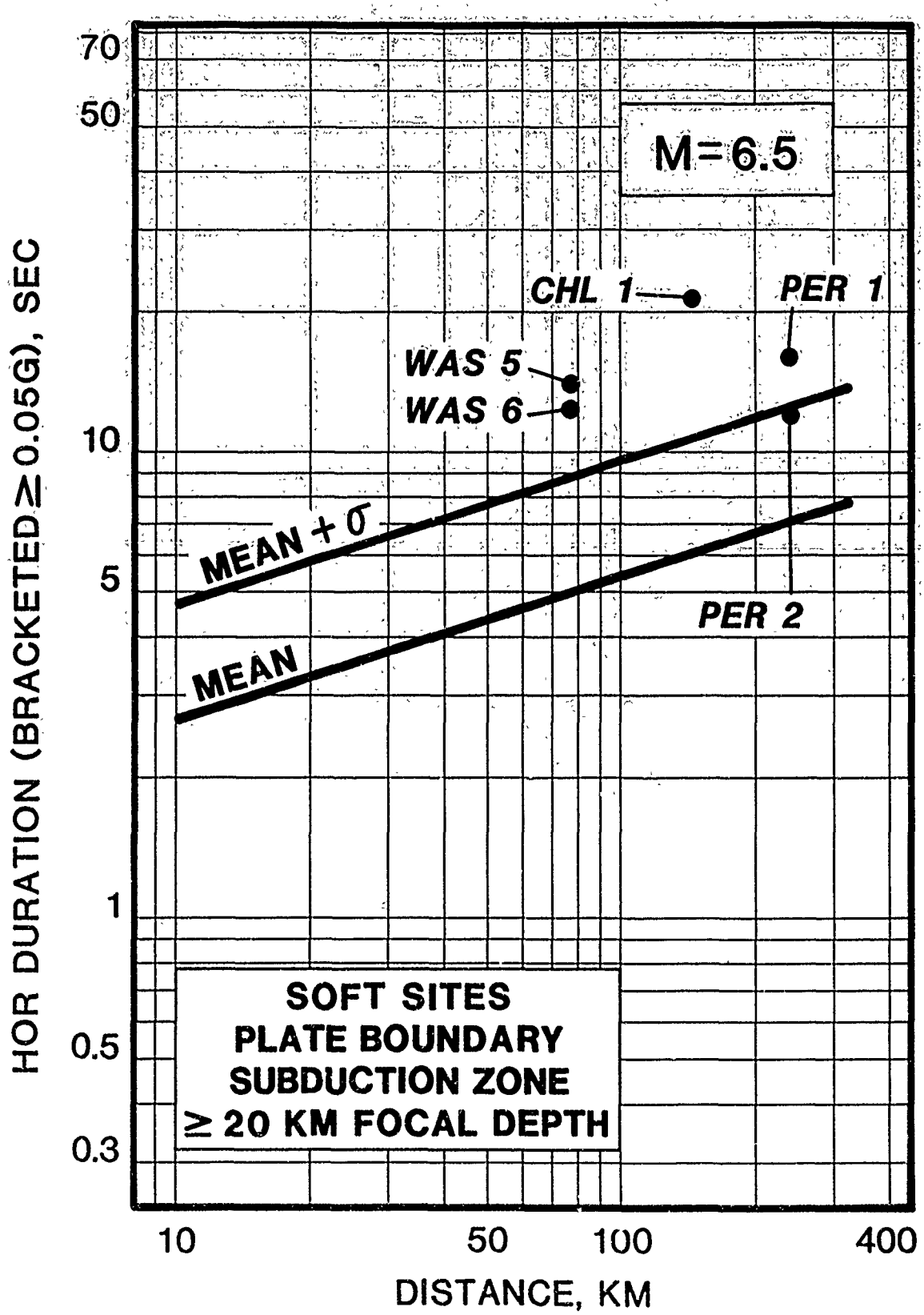


Figure 30c. Accelerograms for duration, M = 6.5, and distance from source for deep earthquakes at soft sites. (See Table 30c.)

Table 30d

Deep-Soft-Dur-Mag 7.0

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
77	14.0	8.2	-5.8	15.0	+1.0	WAS 5
77	12.4	8.2	-4.2	15.0	+2.6	WAS 6
142	21.3	10.0	-11.3	18.2	-3.1	CHL 1
199	11.9	11.4	-0.5	20.0	+8.1	ROM 2
199	9.3	11.4	+2.1	20.0	+10.7	ROM 1

Table 30e

Deep-Soft-Dur-Mag 7.5

Hypo km	Record Dur	Mean Dur	Scale +, -	Plus Sigma	Scale +, -	I.D. No.
72	22.0	13.0	-9.0	24.0	+2.0	WAS 2
72	21.5	13.0	-8.5	24.0	+2.5	WAS 1
94	16.0	14.6	-1.4	26.0	+10.0	WAS 3
94	13.0	14.6	+1.6	26.0	+13.0	WAS 4
189	24.5	17.0	-7.5	31.0	+6.5	CHL 30
199	11.9	18.0	+6.1	31.0	+19.1	ROM 2
199	9.3	18.0	+8.7	31.0	+21.7	ROM 1

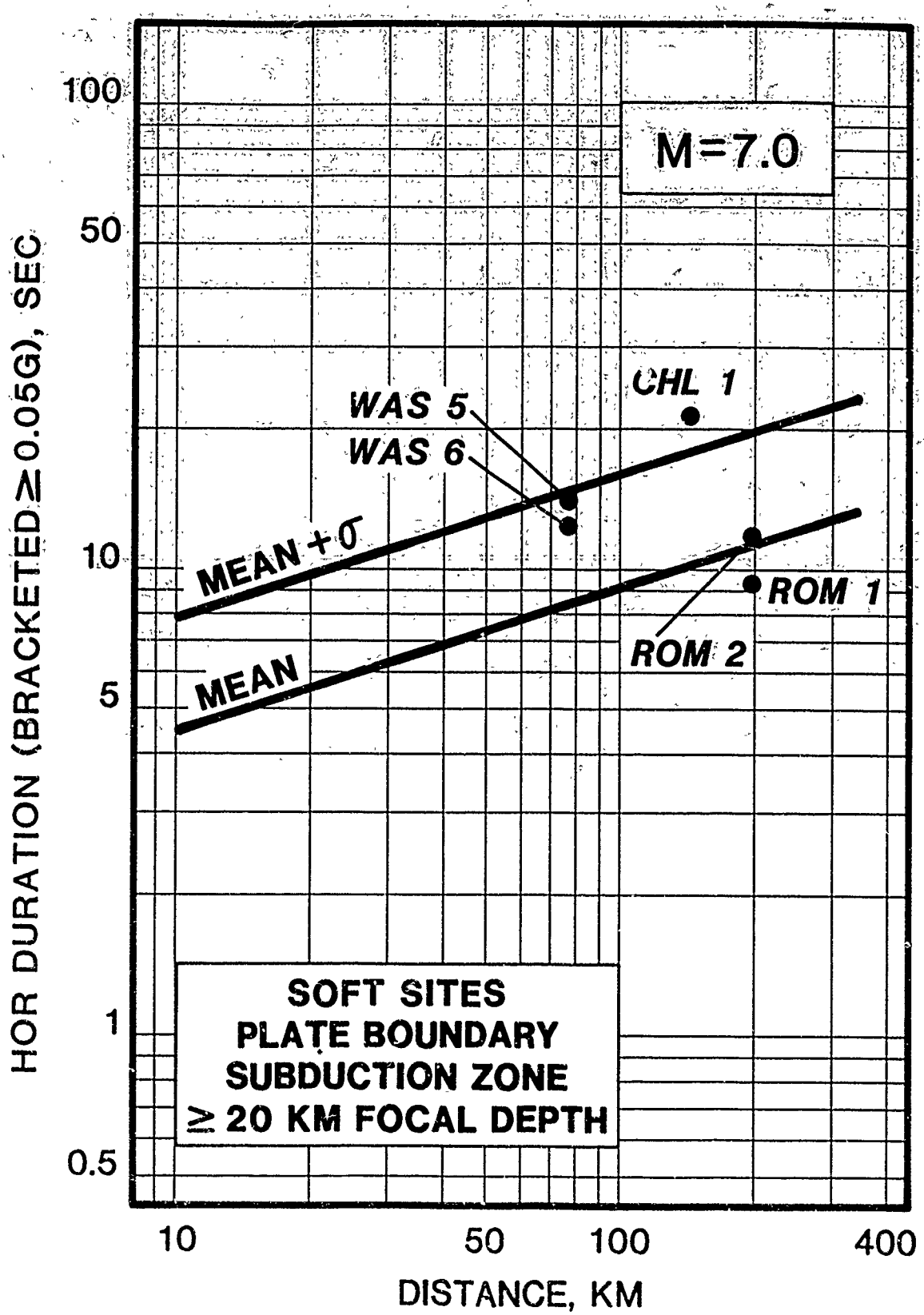


Figure 30d. Accelerograms for duration, M = 7.0, and distance from source for deep earthquakes at soft sites. (See Table 30d.)

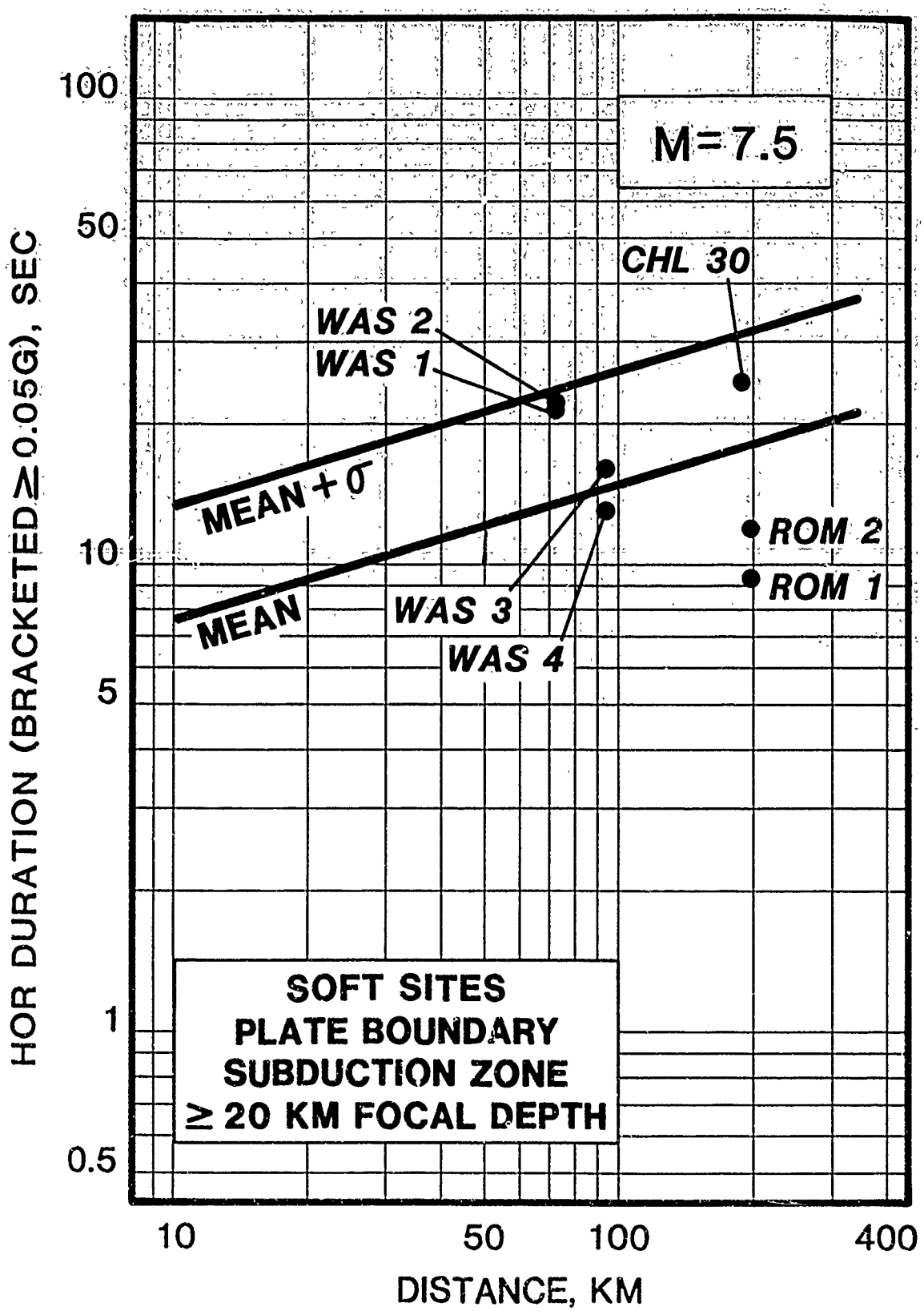


Figure 30e. Accelerograms for duration, M = 7.5, and distance from source for deep earthquakes at soft sites. (See Table 30e.)

PART XV: CONCLUSIONS AND RECOMMENDATIONS

72. When the original strong motion program was initiated by the US Coast and Geodetic Survey in 1932, its charter--promulgated by the civil engineering profession--was to collect ground motion accelerograms at sites of structures liable to earthquake damage. However, structures are found principally in cities. And cities are mostly built on flatlands. Flatlands generally consist of soft soils. Although a modest record was captured on rock at Helena, Montana in 1935, it was not until 1972 that additional accelerograms of significant amplitude were written on rock. Hence, there is a scarcity of records from rock sites.

73. Since each research center wishes to make its own contribution to earthquake engineering, few laboratories have been willing to follow the excellent models available since 1972 of the standardized format developed by the Earthquake Engineering Research Laboratory at the California Institute of Technology. Fortunately, that format is now in use with only minor modification by the major United States strong motion organizations and a few foreign agencies.

74. Nature itself has also conspired to produce mostly shallow seismic events in the majority of our states, thereby limiting the amount of processed data available from deep focus earthquakes.

75. The obvious conclusion derived from the available United States and worldwide inventory, and application of the data, is that we have almost enough information to provide a credible presentation of generic strong motion accelerograms for shallow focus events recorded on soft sites, and a somewhat weaker presentation for hard sites. For deep focus events the existing database is absolutely inadequate, with our presentation furnishing only a framework upon which to collect additional data.

76. Several agencies are working on such basic requirements as a worldwide list of accelerograph stations. Others are cataloging records. However, it is doubtful that these efforts will result in a working file of United States and other accelerograms, together with their response spectra and such other details necessary for utilization of the records. Our recommendation would be that these efforts be coordinated to improve the standardization and utility of the end product.

77. Clearly, the present report should be used only with caution and confirmation of both the data and our analysis.

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APPENDIX A: CATALOGUE OF STRONG-MOTION DATA FOR RECOMMENDED ACCELEROGRAMS

A-1. United States Accelerograms, Approximately 200 Gal or Greater or of Exceptional Interest

A-2. World Accelerograms, Approximately 200 Gal or Greater, or of Exceptional Interest

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km
AKA	1	710502	624	Andreanof Is.	Adak Navy Bs Seic-Vlt	Hard	7.1	43	70
AKA	2	790228	2127	South Alaska	Icy Bay		7.7	13	
CAL	1	330311	154	Long Beach	Long Beach Util Bldg	Soft	6.2	16	27
CAL	2	341230	1352	Laguna Salada,BC	ElCentro ImpVlyIrrDist	Soft	6.5	15	60
CAL	3	400519	436	Imperial Valley	ElCentro ImpVlyIrrDist	Soft	7.1	15	9
CAL	4	400519	436	Imperial Valley	ElCentro ImpVlyIrrDist	Soft	7.1	15	— 9
CAL	5	410701	750	Santa Barbara	Santa Barbara Ct House	Soft	5.9	19	36
CAL	6	520721	1152	Kern County	Taft Lincoln Sch Tunnl	Soft	7.7	16	43
CAL	7	520721	1152	Kern County	Taft Lincoln Sch Tunnl	Soft	7.7	16	43
CAL	8	541221	1956	Eureka	Eureka Fedl Bldg	Soft	6.5	16	24
CAL	9	541221	1956	Eureka	Eureka Fedl Bldg	Soft	6.5	16	24
CAL	10	541221	1956	Eureka	Ferndale City Hall	Soft	6.5	16	40
CAL	11	570318	1856	Oxnard	Pt Hueneme Navy Lab	Soft	4.7	14	6
CAL	12	610409	725	Hollister	Hollister Pub Library	Soft	5.6	19	20
CAL	13	660628	426	Parkfield	Cholame-Shandon 2	Soft	5.6	9	31
CAL	14	660628	426	Parkfield	Cholame-Shandon 5	Soft	5.6	9	32
CAL	15	660628	426	Parkfield	Cholame-Shandon 5	Soft	5.6	9	32
CAL	16	660628	426	Parkfield	Cholame-Shandon 8	Hard	5.6	9	34
CAL	17	660628	426	Parkfield	Cholame-Shandon 8	Hard	5 6	9	34
CAL	18	660628	426	Parkfield	Cholame-Shandon Temb II	Hard	5.6	9	31
CAL	19	660628	426	Parkfield	Cholame-Shandon Temb II	Hard	5.6	9	31
CAL	20	671210	1206	Off Cp Mendocino	Ferndale City Hall	Soft	5.6	19	29
CAL	21	700912	1430	Lytle Creek	Wrightwood	Hard	5.4	8	13
CAL	22*	710209	1401	San Fernando	Pacoima Dam	Rock	6 5	14	9
CAL	23*	710209	1401	San Fernando	Pacoima Dam	Rock	6 5	14	9
CAL	24	710209	1401	San Fernando	Holiday Inn	Soft	6 5	14	22

00 gal or greater or of exceptional interest)

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LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR. deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
Navy Bs Seis-Vlt	Hard	7.1	43	70		270	183	8.0	5.3	8.1	3.7	IV	IV	51.40	177.20
ıy		7.7	13				157				16.5	VI	VI	60.62	141.51
Beach Util Bldg	Soft	6.2	16	27	31	180	193	29.3	22.7	10.0	6.2	IX	VIII	33.60	118.00
tro ImpVlyIrrDist	Soft	6.5	15	60	62	90	179	11.5	3.7	18.2	12.2	X	VI	32.25	115.50
tro ImpVlyIrrDist	Soft	7.1	15	9	17	180	342	33.4	10.9	29.0	24.0	X	IX	32.78	115.49
tro Imp rDist	Soft	7.1	15	9	17	270	210	36.9	19.8	29.0	25.0	X	IX	32.78	115.49
Barbara Ct House	Soft	5.9	19	36	41	45	234	21.1	3.7	4.0	2.0	VIII	VIII	34.30	119.60
ıncoln Sch Tunnl	Soft	7.7	16	43	46	111	176	17.7	9.2	20.0	10.0	XI	VII	35.00	119.00
ıncoln Sch Tunnl	Soft	7.7	16	43	46	21	153	15.7	6.7	20.0	11.0	XI	VII	35.00	119.00
a Fedl Bldg	Soft	6.5	16	24	29	79	253	29.4	14.1	6 02	4.0	VII	VII	40.82	124.08
a Fedl Bldg	Soft	6.5	16	24	29	349	165	31.6	12.4	3 8	3.0	VII	VII	40.82	124.08
ale City Hall	Soft	6.5	16	40	43	314	197	26 0	9.6	18 0	1.4	VII	VII	40.82	124.08
eneme Navy Lab	Soft	4.7	14	6	15	180	164	17.9	4 0	0 52	0 7	SEA	VI	34.12	119.22
er Pub Library	Soft	5.6	19	20	28	271	169	10 8	3.0	8 0	0 1	VII	VII	36.59	121.71
ne-Shandon 2	Soft	5.6	9	31	32	65	480	77 9	26 3	10.9	7 4	VII	VII	35.88	120.42
me-Shandon 5	Soft	5.6	9	32	33	85	426	25.4	7.1	8.0	3.5	VII	VI	35.88	120.42
me-Shandon 5	Soft	5.6	9	32	33	355	348	22 5	5 2	7 4	2 5	VII	VI	35.88	120 42
ne-Shandon 8	Hard	5 6	9	34	35	320	270	11 8	3.9	8 5	2.0	VII	VI	35.88	120.42
ne-Shandon 8	Hard	5.6	9	34	35	50	233	10 8	4 4	8 0	2 6	VII	VI	35.88	120.42
ne-Shandon Temb II	Hard	5 6	9	31	32	335	341	22 5	5 5	3 5	1 1	VII	VII	35.88	120.42
me-Shandon Temb II	Hard	5 6	9	31	32	295	264	14 5	4 7	3 2	1 6	VII	VII	35.88	120.42
ale City Hall	Soft	5 6	19	29	35	224	232	11 9	1 6	2.0	0 2	VI	VI	40.58	124.53
twood	Hard	5 4	8	13	15	205	194	9 6	1 0	2 3	1 9	VI	VI	34.21	117 55
na Dam	Rock	6 5	14	9	17	194	1148	113 2	37 7	12 0	9 0	XI	IX	34.40	118.43
na Dam	Rock	6 5	14	9	17	284	1055	57 7	10 8	12 5	10 4	XI	IX	34 40	118.43
y Inn	Soft	6 5	14	22	26	360	250	30 0	14 9	18 0	11 5	XI	VII	34.40	118.43

eds
-14

Sep 11, 1990

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
8.1	3.7	IV	IV	51.40	177.20	USGS 2701		AR240	51.88	176.58	yes	USGS OF 76-609
	16.5	VI	VI	60.62	141.51	USGS 2734			59.97	141.64	no	Gulf Timber Co.
10.0	6.2	IX	VIII	33.60	118.00	CGS 131	CIT V315	CGS	33.77	118.19	yes	CIT EERL
18.2	12.2	X	VI	32.25	115.50	CGS 117	CIT B024	CGS	32.79	115.55	yes	CIT EERL
29.0	24.0	X	IX	32.78	115.49	CGS 117	CIT A001	CGS	32.79	115.55	yes	CIT EERL
29.0	25.0	X	IX	32.78	115.49	CGS 117	CIT A001	CGS	32.79	115.55	yes	CIT EERL
4.0	2.0	VIII	VIII	34.30	119.60	CGS 283	CIT U299	CGS	34.42	119.70	yes	CIT EERL
20.0	10.0	XI	VII	35.00	119.00	CGS 1094	CIT A004	CGS	35.15	119.46	yes	CIT EERL
20.0	11.0	XI	VII	35.00	119.00	CGS 1094	CIT A004	CGS	35.15	119.46	yes	CIT EERL
6.02	4.0	VII	VII	40.82	124.08	CGS 1022	CIT A008	CGS	40 80	124.16	yes	CIT EERL
3.8	3.0	VII	VII	40.82	124.08	CGS 1022	CIT A008	CGS	40.80	124.16	yes	CIT EERL
18.0	1.4	VII	VII	40.82	124.08	CGS 1023	CIT A009	CGS	40.58	124.26	yes	CIT EERL
0.52	0 7	SEA	VI	34.12	119.22	CGS 272	CIT V329	CGS	34.10	119.20	yes	CIT EERL
8.0	0 1	VII	VII	36.59	121.71	CGS 1028	CIT U309	CGS	36.85	121.40	yes	CIT EERL
0.9	7 4	VII	VII	35.88	120.42	USGS 1013	CIT B033	AR240	35.73	120.29	yes	CIT EERL
8.0	3.5	VII	VI	35.88	120.42	USGS 1014	CIT B034	AR240	35.70	120.33	yes	CIT EERL
7 4	2 5	VII	VI	35.88	120.42	USGS 1014	CIT B034	AR240	35 70	120.33	yes	CIT EERL
8 5	2.0	VII	VI	35.88	120.42	USGS 1015	CIT B035	AR240	35.67	120.36	yes	CIT EERL
8.0	2.6	VII	VI	35.88	120.42	USGS 1015	CIT B035	AR240	35.67	120 36	yes	CIT EERL
3 5	1 1	VII	VII	35.88	120 42	USGS 1097	CIT B037	AR240	35.71	120.17	yes	CIT EERL
3 2	1 6	VII	VII	35.88	120 42	USGS 1097	CIT B037	AR240	35 71	120.17	yes	CIT EERL
2 0	0.2	VI	VI	40 58	124.53	USGS 1023	CIT U312	CGS	40.58	124.26	yes	CIT EERL
2 3	1 9	VI	VI	34.21	117.55	USGS 290	CIT W334	RFT250	34 36	117 63	yes	CIT EERL
2 0	9.0	XI	IX	34 40	118 43	USGS 279	CIT C041	AR240	34 34	119 79	yes	CIT EERL
2 5	10 4	XI	IX	34.40	118.43	USGS 279	CIT C041	AR240	34 34	119.79	yes	CIT EERL
8 0	11 5	XI	VII	34 40	118 43	USGS 241	CIT C048	AR240	34 22	118 47	yes	CIT EERL

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km
CAL	25*	710209	1401	San Fernando	Castaic Old Ridge Rte	Rock	6.5	14	29
CAL	26*	710209	1401	San Fernando	Castaic Old Ridge Rte	Rock	6.5	14	29
CAL	27	710209	1401	San Fernando	Hlywd Stor Bldg Pkg Lot	Soft	6.5	14	37
CAL	28*	710209	1401	San Fernando	Santa Felicia Dam	Rock	6.5	14	32
CAL	29*	710209	1401	San Fernando	Santa Felicia Dam	Rock	6.5	14	32
CAL	30	710209	1401	San Fernando	LA 3407 W 6th St	Soft	6.5	14	40
CAL	31	710209	1401	San Fernando	LA 3407 W 6th St	Soft	6.5	14	40
CAL	32	710209	1401	San Fernando	Glendale 633 E Bdwy	Soft	6.5	14	34
CAL	33	710209	1401	San Fernando	Glendale 633 E Bdwy	Soft	6.5	14	34
CAL	34	710209	1401	San Fernando	LA 646 S Olive Ave	Soft	6.5	14	43
CAL	35	710209	1401	San Fernando	LA 646 S Olive Ave	Soft	6.5	14	43
CAL	36	710209	1401	San Fernando	CIT Millikan Library	Soft	6.5	14	40
CAL	37	710209	1401	San Fernando	CIT Millikan Library	Soft	6.5	14	40
CAL	38*	710209	1401	San Fernando	CIT Seismo Lab	Rock	6.5	14	34
CAL	39	710209	1401	San Fernando	Pasadena JPL	Soft	6.5	14	31
CAL	40	710209	1401	San Fernando	LA 15250 Ventura Blvd	Soft	6.5	14	29
CAL	41	710209	1401	San Fernando	Bev Hls 450 N Roxbury	Soft	6.5	14	37
CAL	42	710209	1401	San Fernando	Lake Hughes Array 1	Soft	6.5	14	32
CAL	43*	710209	1401	San Fernando	Lake Hughes Array 4	Rock	6.5	14	30
CAL	44*	710209	1401	San Fernando	Lake Hughes Array 12	Rock	6.5	14	27
CAL	45*	710209	1401	San Fernando	Lake Hughes Array 12	Rock	6.5	14	27
CAL	46*	710209	1401	San Fernando	LA Griffith Pk Obs	Rock	6.5	14	36
CAL	47*	710209	1401	San Fernando	LA Griffith Pk Obs	Rock	6.5	14	36
CAL	48	710209	1401	San Fernando	LA 1625 Olympic Blvd	Soft	6.5	14	42
CAL	49	710209	1401	San Fernando	LA 4867 Sunset Blvd	Hard	6.5	14	36
CAL	50	710209	1401	San Fernando	LA 4867 Sunset Blvd	Hard	6.5	14	36

gal or greater or of exceptional interest)

David J. Leeds
DJLA 90-21-14

LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR. deg	HOR gal	VEL cm/s	DISP cm	DURATION		INTENSITY		EPICENTER	
										g5%	g10%	EPI	STA	LAT	LONG
Old Ridge Rte	Rock	6.5	14	29	32	21	309	16.5	4.2	13.8	3.9	XI	VI	34.40	118.43
Old Ridge Rte	Rock	6.5	14	29	32	291	265	27.2	9.3	18.5	14.0	XI	VI	34.40	118.43
tor Bldg Pkg Lot	Soft	6.5	14	37	40	90	207	21.1	14.7	9.5	5.5	XI	VII	34.40	118.43
licia Dam	Rock	6.5	14	32	35	172	213	9.9	7.0	11.5	7.0	XI	VI	34.40	118.43
licia Dam	Rock	6.5	14	32	35	262	198	6.2	4.6	6.5	2.0	XI	VI	34.40	118.43
W 6th St	Soft	6.5	14	40	42	90	162	16.5	10.3	11.3	4.7	XI	VII	34.40	118.43
W 6th St	Soft	6.5	14	40	42	180	158	18.3	9.0	12.7	10.0	XI	VII	34.40	118.43
633 E Bdwy	Soft	6.5	14	34	37	110	266	30.7	11.1	16.0	6.0	XI	VII	34.40	118.43
633 E Bdwy	Soft	6.5	14	34	37	200	209	23.5	5.3	10.2	8.0	XI	VII	34.40	118.43
S Olive Ave	Soft	6.5	14	43	46	127	236	21.8	13.2	7.0	6.0	XI	VII	34.40	118.43
S Olive Ave	Soft	6.5	14	43	45	217	192	18.5	13.4	7.2	4.5	XI	VII	34.40	118.43
an Library	Soft	6.5	14	40	42	360	198	9.8	2.7	10.8	5.8	XI	VII	34.40	118.43
an Library	Soft	6.5	14	40	42	90	182	16.3	6.9	11.5	2.5	XI	VII	34.40	118.43
no Lab	Rock	6.5	14	34	37	270	189	11.6	5.0	6.6	3.2	XI	VI	34.40	118.43
JPL	Soft	6.5	14	31	34	98	208	13.4	5.0	7.6	3.0	XI	VII	34.40	118.43
0 Ventura Blvd	Soft	6.5	14	29	34	11	221	28.2	13.4	16.8	11.5	XI	VII	34.40	118.43
150 N Roxbury	Soft	6.5	14	37	40	50	184	17.2	9.2	8.25	5.5	XI	VI	34.40	118.43
hes Array 1	Soft	6.5	14	32	35	21	146	18.0	3.4	13.5	2.0	XI	VI	34.40	118.43
hes Array 4	Rock	6.5	14	30	33	111	168	5.3	1.2	6.5	2.6	XI	VI	34.40	118.43
hes Array 12	Rock	6.5	14	27	30	21	346	14.7	1.8	13.0	4.3	XI	VI	34.40	118.43
hes Array 12	Rock	6.5	14	27	30	291	278	12.4	8.9	14.00	5.0	XI	VI	34.40	118.43
h Pk Obs	Rock	6.5	14	36	39	180	177	20.2	7.3	9.50	6.5	XI	VII	34.40	118.43
h Pk Obs	Rock	6.5	14	36	39	270	167	14.6	5.4	10.8	6.0	XI	VII	34.40	118.43
Olympic Blvd	Soft	6.5	14	42	44	298	239	21.2	10.3	8.0	6.0	XI	VII	34.40	118.43
Sunset Blvd	Hard	6.5	14	36	39	179	156	16.2	7.9	6.0	5.5	XI	VII	34.40	118.43
Sunset Blvd	Hard	6.5	14	36	39	269	154	23.3	8.0	10.0	7.5	XI	VII	34.40	118.43

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1-14

Sep 11, 1990

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
13.8	3.9	XI	VI	34.40	118.43	USGS 5130	CIT D056	AR240	34.56	118.66	yes	CIT EERL
18.5	14.0	XI	VI	34.40	118.43	USGS 5130	CIT D056	AR240	34.56	118.66	yes	CIT EERL
9.5	5.5	XI	VII	34.40	118.43	USGS 133	CIT D058	CGS	34.09	118.34	yes	CIT EERL
11.5	7.0	XI	VI	34.40	118.43	USGS 285	CIT E081	AR240	34.46	118.75	yes	CIT EERL
6.5	2.0	XI	VI	34.40	118.43	USGS 285	CIT E081	AR240	34.46	118.75	yes	CIT EERL
11.3	4.7	XI	VII	34.40	118.43	USGS 199	CIT E083	AR240	34.03	118.30	yes	CIT EERL
12.7	10.0	XI	VII	34.40	118.43	USGS 199	CIT E083	AR240	34.06	118.30	yes	CIT EERL
15.0	6.0	XI	VII	34.40	118.43	USGS 122	CIT F088	AR240	34.15	118.25	yes	CIT EERL
10.2	8.0	XI	VII	34.40	118.43	USGS 122	CIT F088	AR240	34.15	118.25	yes	CIT EERL
7.0	6.0	XI	VII	34.40	118.43	USGS 166	CIT F088	AR240	34.05	118.25	yes	CIT EERL
7.2	4.5	XI	VII	34.40	118.43	USGS 166	CIT F088	AR240	34.05	118.25	yes	CIT EERL
10.8	5.8	XI	VII	34.40	118.43	USGS 264	CIT G108	RFT250	34.14	118.13	yes	CIT EERL
11.5	2.5	XI	VII	34.40	118.43	USGS 264	CIT G108	RFT250	34.14	118.13	yes	CIT EERL
6.6	3.2	XI	VII	34.40	118.43	USGS 5178	CIT G106	RFT250	34.14	118.17	yes	CIT EERL
7.6	3.0	XI	VII	34.40	118.43	USGS 267	CIT G110	RFT250	34.20	118.17	yes	CIT EERL
16.8	11.5	XI	VII	34.40	118.43	USGS 466	CIT H115	SMA-1	34.25	118.46	yes	CIT EERL
6.25	5.5	XI	VI	34.40	118.43	USGS 455	CIT I131	SMA-1	34.08	118.39	yes	CIT EERL
13.5	2.0	XI	VI	34.40	118.43	USGS 125	CIT J141	AR240	34.68	118.44	yes	CIT EERL
6.5	2.6	XI	VI	34.40	118.43	USGS 126	CIT J142	RFT250	34.64	118.48	yes	CIT EERL
13.0	4.3	XI	VI	34.40	118.43	USGS 128	CIT J144	AR240	34.57	118.56	yes	CIT EERL
14.00	5.0	XI	VI	34.40	118.43	USGS 128	CIT J144	AR240	34.57	118.56	yes	CIT EERL
9.50	6.5	XI	VII	34.40	118.43	USGS 141	CIT O198	RFT250	34.12	118.30	yes	CIT EERL
10.8	6.0	XI	VII	34.40	118.43	USGS 141	CIT O198	RFT250	34.12	118.30	yes	CIT EERL
8.0	6.0	XI	VII	34.40	118.43	USGS 469	CIT O199	SMA1	34.05	118.27	yes	CIT EERL
6.0	5.5	XI	VII	34.40	118.43	USGS 226	CIT P214	AR240	34.10	118.29	yes	CIT EERL
10.0	7.5	XI	VII	34.40	118.43	USGS 226	CIT P214	AR240	34.10	118.29	yes	CIT EERL

(3)

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km
CAL	51*	710209	1401	San Fernando	Arcadia Sta Anita Res	Rock	6.5	14	43
CAL	52	710209	1401	San Fernando	LA 14724 Ventura Blvd	Soft	6.5	14	29
CAL	53	710209	1401	San Fernando	LA 14724 Ventura Blvd	Soft	6.5	14	29
CAL	54	710209	1401	San Fernando	Hlwd 1760 N Orchid	Soft	6.5	14	35
CAL	55	710209	1401	San Fernando	Bev Hls 9100 Wilshire	Soft	6.5	14	38
CAL	56	710209	1401	San Fernando	LA 6430 Sunset Blvd	Soft	6.5	14	35
CAL	57	710209	1401	San Fernando	LA 6430 Sunset Blvd	Soft	6.5	14	35
CAL	58	710209	1401	San Fernando	LA 234 S Figueroa St	Hard	6.5	14	41
CAL	59	710209	1401	San Fernando	LA 234 S Figueroa St	Hard	6.5	14	41
CAL	60	710209	1401	San Fernando	LA 535 S Fremont	Soft	6.5	14	42
CAL	61	710209	1401	San Fernando	LA 535 S Fremont	Soft	6.5	14	42
CAL	62	710209	1401	San Fernando	LA 3550 Wilshire Blvd	Soft	6.5	14	40
CAL	63*	720904	1804	Bear Valley	Stone Canyon Observatory	Rock	4.7	8	20
CAL	64*	720904	1804	Bear Valley	Stone Canyon Observatory	Rock	4.7	8	20
CAL	65	720904	1804	Bear Valley	Melendy Ranch	Hard	4.7	8	17
CAL	66	720904	1804	Bear Valley	Melendy Ranch	Hard	4.7	8	17
CAL	67	750112	137	No. Calif. Coast	Petrolia Gen. Store	Soft	4.4	5	12
CAL	68	750607	846	Cape Mendocino	Ferndale City Hall	Soft	5.3	19	5
CAL	69	750607	846	Cape Mendocino	Ferndale City Hall	Soft	5.3	19	5
CAL	70	750607	846	Cape Mendocino	Cape Mendocino/Petrolia	Hard	5.3	19	22
CAL	71	750803	103	Oroville	Oroville Dept Wtr Resvr	Hard	4.6	9	16
CAL	72	750806	350	Oroville	Oroville Johnson Ranch	Hard	4.7	9	17
CAL	73	750806	350	Oroville	Oroville Johnson Ranch	Hard	4.7	9	17
CAL	74	750806	350	Oroville	Oroville Medical Ctr	Soft	4.7	9	15
CAL	75	750913	2120	Central Calif.	Vineyard Canyon	Soft	4.9	13	9
CAL	76	750913	2120	Central Calif.	Vineyard Canyon	Soft	4.9	13	9

gal or greater or of exceptional interest)

David J. Leeds
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LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
Sta Anita Res	Rock	6.5	14	43	45	273	166	6.6	5.9	8.5	4.0	XI	VI	34.40	118.43
24 Ventura Blvd	Soft	6.5	14	29	32	348	243	31.6	18.3	17.50	10.0	XI	VII	34.40	118.43
24 Ventura Blvd	Soft	6.5	14	29	32	282	197	17.6	9.5	23.0	8.0	XI	VII	34.40	118.43
760 N Orchid	Soft	6.5	14	35	38	90	167	13.5	6.1	9.2	4.0	XI	VII	34.40	118.43
9100 Wilshire	Soft	6.5	14	38	40	90	162	19.0	11.6	12.9	5.8	XI	VII	34.40	118.43
) Sunset Blvd	Soft	6.5	14	35	38	180	184	19.7	7.7	9.6	5.0	XI	VII	34.40	118.43
) Sunset Blvd	Soft	6.5	14	35	38	90	174	18.2	10.2	10.5	4.6	XI	VII	34.40	118.43
S Figueroa St	Hard	6.5	14	41	43	37	196	16.8	8.3	9.3	5.8	XI	VII	34.40	118.43
S Figueroa St	Hard	6.5	14	41	43	127	188	18.8	9.5	10.8	3.0	XI	VII	34.40	118.43
S Fremont	Soft	6.5	14	42	44	330	242	19.3	11.5	8.0	6.8	XI	VII	34.40	118.43
S Fremont	Soft	6.5	14	42	44	240	221	18.0	12.5	11.8	5.5	XI	VII	34.40	118.43
) Wilshire Blvd	Soft	6.5	14	40	42	360	154	17.3	8.0	14.5	5.0	XI	VII	34.06	118.30
anyon Observatory	Rock	4.7	8	20	22	177	209	7.44	1.10	4.2	1.2	VI	VI	36.54	121.41
anyon Observatory	Rock	4.7	8	20	22	87	156	5.81	1.05	3.0	2.0	VI	VI	36.54	121.41
Ranch	Hard	4.7	8	17	19	331	506	13 72	2.68	4.4	2.4	VI	VI	36.54	121.41
Ranch	Hard	4.7	8	17	19	61	471	17.33	0.86	5.5	1.3	VI	VI	36.54	121.41
Gen. Store	Soft	4.4	5	12	13	75	180	5.9	0.24	1.0	0.1	VI	VI	40.22	124.26
City Hall	Soft	5.3	19	5	20	314	199	11.5	1.19	3.3	1.4	VII	VII	40.59	124.18
City Hall	Soft	5.3	19	5	20	224	175	11.2	3.18	5 8	1 8	VII	VII	40.59	124.18
ndocino/Petrolia	Hard	5.3	19	22	29	120	199	5.91	0.56	2.6	1.0	VII	VI	40.59	124.18
Dept Wtr Resvr	Hard	4.6	9	16	18		191					VI	VI	39 45	121.66
Johnson Ranch	Hard	4 7	9	17	19		680					V	V	39 46	121.70
Johnson Ranch	Hard	4.7	9	17	19		332					V	V	39.46	121.70
Medical Ctr	Soft	4.7	9	15	17		314					V	V	39.46	121.70
1 Canyon	Soft	4.9	13	9	16		284				1 7	VI	V	36.00	120.56
1 Canyon	Soft	4.9	13	9	16		206				1.2	VI	V	36.00	120.56

eds
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Sep 11, 1990

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
8.5	4.0	XI	VI	34.40	118.43	USGS 104	CIT P221	AR240	34.19	118.02	yes	CIT EERL
17.50	10.0	XI	VII	34.40	118.43	USGS 253	CIT Q233	MO2	34.15	118.46	yes	CIT EERL
23.0	8.0	XI	VII	34.40	118.43	USGS 253	CIT Q233	MO2	34.15	118.46	yes	CIT EERL
9.2	4.0	XI	VII	34.40	118.43	USGS 446	CIT Q236	MO2	34.10	118.34	yes	CIT EERL
12.9	5.8	XI	VII	34.40	118.43	USGS 416	CIT Q239	MO2	34.07	118.39	yes	CIT EERL
9.6	5.0	XI	VII	34.40	118.43	USGS 232	CIT R248	MO2	34.10	118.33	yes	CIT EERL
10.5	4.6	XI	VII	34.40	118.43	USGS 232	CIT R248	MO2	34.10	118.33	yes	CIT EERL
9.3	5.8	XI	VII	34.40	118.43	USGS 148	CIT R251	MO2	34.06	118.25	yes	CIT EERL
10.8	3.0	XI	VII	34.40	118.43	USGS 148	CIT R251	MO2	34.06	118.25	yes	CIT EERL
8.0	6.8	XI	VII	34.40	118.43	USGS 160	CIT R253	MO2	34.05	118.26	yes	CIT EERL
11.8	5.5	XI	VII	34.40	118.43	USGS 160	CIT R253	MO2	34.05	118.26	yes	CIT EERL
14.5	5.0	XI	VII	34.06	118.30	USGS 211	CIT S266	MO2	34.06	118.30	yes	CIT EERL
4.2	1.2	VI	VI	36.54	121.41	USGS 1202		SMA-1	36.64	121.24	yes	USGS OF 78-941
3.0	2.0	VI	VI	36.54	121.41	USGS 1202		SMA-1	36.64	121.24	yes	USGS OF 78-941
4.4	2.4	VI	VI	36.54	121.41	USGS 1211		RFT250	36.59	121.19	yes	USGS OF 78-941
5.5	1.3	VI	VI	36.54	121.41	USGS 1211		RFT250	36.59	121.19	yes	USGS OF 78-941
1.0	0.1	VI	VI	40.22	124.26	USGS 1398			40.32	124.29	yes	USGS OF 79-929
3.3	1.4	VII	VII	40.59	124.18	USGS 1023	8	CGS	40.58	124.16	yes	USGS OF 79-929
5.8	1.8	VII	VII	40.59	124.18	USGS 1023	8	CGS	40.58	124.16	yes	USGS OF 79-929
2.6	1.0	VII	VI	40.59	124.18	USGS 1249	9	SMA-1	40.35	124.16	yes	USGS OF 79-929
		VI	VI	39.45	121.66	USGS 1543	A12	SMA-2	39.51	121.50	no	
		V	V	39.46	121.70	USGS 1493	F05		39.42	131.52	no	
		V	V	39.46	121.70	USGS 1493	F05		39.42	131.52	no	
		V	V	39.46	121.70	USGS 1544	F10	SMA-2	39.51	131.54	no	
	1.7	VI	V	36.00	120.56	USGS 1405			35 92	120 53	no	USGS Circ 749-C
	1.2	VI	V	36.00	120.56	USGS 1405			35.92	120.53	no	USGS Circ 749-C

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km
CAL	77	750927	2234	Oroville	Oroville Johnson Ranch	Hard	4.6	12	17
CAL	78	750927	2234	Oroville	Oroville Johnson Ranch	Hard	4.6	12	17
CAL	79	771114	11	Imp. Vly Swarm	ElCentro Array #6	Soft	3.9	5	
CAL	80	771114	11	Imp. Vly Swarm	ElCentro Array #6	Soft	3.9	5	
CAL	81	771114	205	Imp. Vly Swarm	ElCentro Array #6	Soft	5.0	5	
CAL	82	771114	205	Imp. Vly Swarm	ElCentro Array #6	Soft	5.0	5	—
CAL	83	771114	530	Imp. Vly Swarm	ElCentro Array #6	Soft	3.3	7	
CAL	84	771114	530	Imp. Vly Swarm	ElCentro Array #6	Soft	3.3	7	
CAL	85	771114	536	Imp. Vly Swarm	ElCentro Array #8	Soft	4.1	5	
CAL	86	780326	27	No. Calif.	Coyote Dam, toe	Hard	4.9	9	
CAL	87	780326	27	No. Calif.	Coyote Dam, toe	Hard	4.9	9	
CAL	88	780326	27	No. Calif.	Coyote Dam, abutment	Hard	4.9	9	
CAL	89	780813	2254	Santa Barbara	Goleta UCSB North Hall	Hard	5.1	12	13
CAL	90	780813	2254	Santa Barbara	Goleta UCSB North Hall	Hard	5.1	12	13
CAL	91	780813	2254	Santa Barbara	Sta Barb Frenas Bldg	Soft	5.1	12	6
CAL	92	780813	2254	Santa Barbara	Goleta UCSB Freefield	Hard	5.1	12	14
CAL	93	780813	2254	Santa Barbara	Goleta UCSB Freefield	Hard	5.1	12	14
CAL	94	780813	2254	Santa Barbara	Goleta SCE Substation	Hard	5.1	12	18
CAL	95	780813	2254	Santa Barbara	Goleta SCE Substation	Hard	5.1	12	18
CAL	96	780813	2254	Santa Barbara	Santa Barbara Ct House	Soft	5.1	12	6
CAL	97	781004	1642	Bishop	Long Vly Dam, lt abut	Hard	5 7	9	8
CAL	98	781004	1642	Bishop	Long Vly Dam, lt abut	Hard	5.7	9	8
CAL	99	790806	1705	Coyote Lake	San Martin/Coyote Crk	Hard	5.9	10	2
CAL	100	790806	1705	Coyote Lake	Gilroy Array 6	Hard	5 9	10	10
CAL	101	790806	1705	Coyote Lake	Gilroy Array 6	Hard	5.9	10	10
CAL	102	790806	1705	Coyote Lake	Gilroy Array 4	Soft	5.9	10	12

(2)

0 gal or greater or of exceptional interest)

David J. Leeds
DJLA 90-21-14

LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR. deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
e Johnson Ranch	Hard	4.6	12	17	21		497					V	V	39.52	12 .67
e Johnson Ranch	Hard	4.6	12	17	21		221					V	V	39.52	121.67
ro Array #6	Soft	3.9	5				490					III	III	32.83	115.47
ro Array #6	Soft	3.9	5				441					III	III	32.83	115.47
ro Array #6	Soft	5.0	5				372				1.3	VI	VI	32.82	115.47
ro Array #6	Soft	5.0	5				402				1.2	VI	VI	32.82	115.47
ro Array #6	Soft	3.3	7				245				0.1	III	III	32.83	115.47
ro Array #6	Soft	3.3	7				225				0.1	III	III	32.83	115.47
ro Array #8	Soft	4.1	5				225				0.10	IV	IV	32.83	115.47
Dam, toe	Hard	4.9	9				333				1.1	VI		39.21	123.17
Dam, toe	Hard	4.9	9				216				1.2	VI		39.21	123.17
Dam, abutment	Hard	4.9	9				196				0.8	VI		39.21	123.17
UCSB North Hall	Hard	5.1	12	13	18	1	396	34.4	5.59	10.7	5.3	VII	VII	34.37	119 72
UCSB Nort.ı Hall	Hard	5.1	12	13	18	3	269	21.3	2.59	9.3	2.8	VII	VII	34.37	119.72
b Freitas Bldg	Soft	5 1	12	6	13	3	230	19.9	2.58	5 9	4.2	VII	VII	34.37	119.72
UCSB Freefield	Hard	5.1	12	14	18	180	340	39.64	7.34	11.7	5.1	VII	VII	34.37	119.72
UCSB Freefield	Hard	5.1	12	14	18	90	18[illegible]	26.1	4 25	10.2	6.6	VII	VII	34.37	119.72
SCE Substation	Hard	5.1	12	18	22	360	280	20.9	2.2	4.9	1.8	VII	VII	34.37	119.72
SCE Substation	Hard	5.1	12	18	22	90	234	8.2	0.7	3.6	2.2	VII	VII	34.37	119.72
Barbara Ct House	Soft	5.1	12	6	13		200	15.7	2.43	6.6	1.3	VII	VII	34.37	119.72
ly Dam, lt abut	Hard	5.7	9	8	12		255					VI	VI	34.37	118.70
ly Dam, lt abut	Hard	5.7	9	8	12		170					VI	VI	34 37	118.70
rtin/Coyote Crk	Hard	5.9	10	2	10	250	245	20.5	2 38	5.6	1.5	VII	VII	37.11	121.53
Array 6	Hard	5.9	10	10	14	230	409	43.84	9.34	8.9	3.2	VII	VII	37.11	121 53
Array 6	Hard	5.9	10	10	14	320	315	25.1	3 62	7 0	1 8	VII	VII	37.11	121.53
Array 4	Soft	5.9	10	12	16	360	246	32.2	5.20	12.6	3.8	VII	VII	37.11	121 53

(3)

seds
21-14

Sep 11, 1990

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
		V	V	39.52	121.67	USGS 1493	U09		39.42	121.52	no	
		V	V	39.52	121.67	USGS 1493	U09		39.42	121.52	no	
		III	III	32.83	115.47	CDMG		SMA-1	32.84	115.49	no	US EQe 1977
		III	III	32.83	115.47	CDMG		SMA-1	32.84	115.49	no	US EQe 1977
	1.3	VI	VI	32.82	115.47	CDMG		SMA-1	32.84	115.49	no	US EQe 1977
	1.2	VI	VI	32.82	115.47	CDMG		SMA-1	32.84	115.49	no	US EQe 1977
	0.1	III	III	32.83	115.47	CDMG		SMA-1	32.84	115.49	no	US EQe 1977
	0.1	III	III	32.83	115.47	CDMG		SMA-1	32.84	115.49	no	US EQe 1977
	0.10	IV	IV	32.83	115.47	CDMG		SMA-1	32.81	115.53	no	US EQe 1977
	1.1	VI		39.21	123.17	ACOE			39.20	123.18	no	
	1.2	VI		39.21	123.17	ACOE			39.20	123.18	no	
	0.8	VI		39.21	123.17	ACOE			39.19	123.18	no	USGS Circ. 785-A
10.7	5.3	VII	VII	34.37	119.72	CDMG 213		CRA-1	34.41	119.85	yes	CDMG SR-144
9.3	2.8	VII	VII	34.37	119.72	CDMG 213		CRA-1	34.41	119.85	yes	CDMG SR-144
5.9	4.2	VII	VII	34.37	119.72	CDMG 302		CRA-1	34.42	229.70	yes	CDMG SR-144
11.7	5.1	VII	VII	34.37	119.72	CDMG 91	CDMG	RFT250	34.42	119.85	yes	CDMG SR-144
10.2	6.6	VII	VII	34.37	119.72	CDMG 91	CDMG	RFT250	34.42	119.85	yes	CDMG SR-144
4.9	1.8	VII	VII	34.37	119.72	SCE		SMA-2	34.46	119.88	yes	Kinemetrics DataRpt
3.6	2.2	VII	VII	34.37	119.72	SCE		SMA-2	34.46	119.88	yes	Kinemetrics DataRpt
6.6	1.3	VII	VII	34.37	119.72	USGS 283		RFT250	34.42	119.70	TH	EERI Rpt Dec '78
		VI	VI	34.37	118.70	CDMG 214		SMA-1T	37.59	118.71	TH	CDMG OSMS 78-7.1
		VI	VI	34.37	118.70	CDMG 214		SMA-1T	37 59	118.71	TH	CDMG OSMS 78-7.1
5.6	1.5	VII	VII	37.11	121.53	CDMG 1445		SMA-1	37.12	121.55	yes	USGS OF 81-42
8.9	3.2	VII	VII	37.11	121.53	CDMG 1413		SMA-1T	37.03	121.48	yes	USGS OF 81-42
7 0	1.8	VII	VII	37.11	121.53	CDMG 1413		SMA-1T	37.03	121.48	yes	USGS OF 81-42
12.6	3.8	VII	VII	37 11	121.53	CDMG 1411		SMA-1T	37 00	121.52	yes	USGS OF 81-42

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km
CAL	103	790806	1705	Coyote Lake	Gilroy Array 4	Soft	5.9	10	12
CAL	104	790806	1705	Coyote Lake	Gilroy Array 3	Soft	5.9	10	13
CAL	105	790806	1705	Coyote Lake	Gilroy Array 3	Soft	5.9	10	13
CAL	106	790806	1705	Coyote Lake	Gilroy Array 2	Soft	5.9	10	14
CAL	107	790806	1705	Coyote Lake	Gilroy Array 2	Soft	5.9	10	14
CAL	108	791015	2316	Imperial Valley	ElCentro Sta 7	Soft	6.6	12	26
CAL	109	791015	2316	Imperial Valley	ElCentro Sta 7	Soft	6.6	12	26
CAL	110	791015	2316	Imperial Valley	ElCentro Sta 6	Soft	6.6	12	27
CAL	111	791015	2316	Imperial Valley	ElCentro Sta 6	Soft	6.6	12	27
CAL	112	791015	2316	Imperial Valley	ElCentro Sta 9	Soft	6.6	12	26
CAL	113	791015	2316	Imperial Valley	ElCentro Sta 9	Soft	6.6	12	26
CAL	114	791015	2316	Imperial Valley	Bonds Cnr, Hwy 98-115	Soft	6.6	12	6
CAL	115	791015	2316	Imperial Valley	Bonds Cnr, Hwy 98-115	Soft	6.6	12	6
CAL	116	791015	2316	Imperial Valley	ElCentro Sta 8	Soft	6.6	12	27
CAL	117	791015	2316	Imperial Valley	ElCentro Sta 8	Soft	6.6	12	27
CAL	118	791015	2316	Imperial Valley	ElCentro Sta 5	Soft	6.6	12	28
CAL	119	791015	2316	Imperial Valley	ElCentro Sta 5	Soft	6.6	12	28
CAL	120	791015	2316	Imperial Valley	ElCentro Diff Array	Soft	6.6	12	26
CAL	121	791015	2316	Imperial Valley	ElCentro Diff Array	Soft	6.6	12	26
CAL	122	791015	2316	Imperial Valley	ElCentro Sta 4	Soft	6.6	12	26
CAL	123	791015	2316	Imperial Valley	ElCentro Sta 4	Soft	6.6	12	26
CAL	124	791015	2316	Imperial Valley	Brawley Airport	Soft	6.6	12	42
CAL	125	791015	2316	Imperial Valley	Brawley Airport	Soft	6.6	12	42
CAL	126	791015	2316	Imperial Valley	Holtville Post Office	Soft	6.6	12	19
CAL	127	791015	2316	Imperial Valley	Holtville Post Office	Soft	6.6	12	19
CAL	128	791015	2316	Imperial Valley	ElCentro Sta 10	Soft	6.6	12	27

) gal or greater or of exceptional interest)

David J. Leeds
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LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR. deg	HOR gal	VEL cm/s	DISP cm	DURATION		INTENSITY		EPICENTER	
										g5%	g10%	EPI	STA	LAT	LONG
Array 4	Soft	5.9	10	12	16	270	228	25.24	2.95	8.8	6.1	VII	VII	37.11	121.53
Array 3	Soft	5.9	10	13	16	50	252	16.9	3.68	9.6	2.5	VII	VII	37.11	121.53
Array 3	Soft	5.9	10	13	16	140	246	29.43	5.66	10.2	3.0	VII	VII	37.11	121.53
Array 2	Soft	5.9	10	14	17	140	249	31.9	5.34	6.0	1.4	VII	VII	37.11	1.53
Array 2	Soft	5.9	10	14	17	50	187	10.20	2.24	7.1	1.7	VII	VII	37.11	121.53
o Sta 7	Soft	6.6	12	26	29	230	454	107.8	41.36	10.2	4.9	VII	VII	32.63	115.33
o Sta 7	Soft	6.6	12	26	29	140	327	45.0	19.52	7.7	3.8	VII	VII	32.63	115.33
o Sta 6	Soft	6.6	12	27	30	230	428	108.7	55.16	11.2	7.9	VII	VII	32.63	115.33
o Sta 6	Soft	6.6	12	27	30	140	369	63.1	26.94	11.9	10.0	VII	VII	32.63	115.33
o Sta 9	Soft	6.6	12	26	29		350			14.0	7.4	VII	VII	32.63	115.33
o Sta 9	Soft	6.6	12	26	29		265			13.0	7.0	VII	VII	32.63	115.33
Cnr, Hwy 98-115	Soft	6.6	12	6	13	230	770	44.1	14.64	17.5	13.2	VII	VII	32.63	115.33
Cnr, Hwy 98-115	Soft	6.6	12	6	13	140	576	43.63	12.19	19.1	13.3	VII	VII	32.63	115.33
o Sta 8	Soft	6.6	12	27	30	140	598	53.43	22.25	11.4	6.9	VII	VII	32.63	115.33
o Sta 8	Soft	6.6	12	27	30	230	457	47.71	29.34	10.2	6.1	VII	VII	32.63	115.33
o Sta 5	Soft	6.6	12	28	30	140	517	44.0	21.84	10.2	6.3	VII	VII	32.63	115.33
o Sta 5	Soft	6.6	12	28	30	230	367	86.6	51 85	14 4	10.2	VII	VII	32.63	115.33
o Diff Array	Soft	6.6	12	26	29	360	477	42.51	13.69	11.7	6.1	VII	VII	32.63	115.33
o Diff Array	Soft	6.6	12	26	29	270	345	67.8	33.75	15.3	7.1	VII	VII	32.63	115.33
o Sta 4	Soft	6.6	12	26	29	140	484	37.1	11.91	12.8	7 4	VII	VII	32.63	115.33
o Sta 4	Soft	6.6	12	26	29	230	350	77.7	48 02	12.3	6 4	VII	VII	32.63	115 33
Airport	Soft	6.6	12	42	44	315	217	37 12	10.64	11.3	2.2	VII	VII	32.63	115.33
Airport	Soft	6.6	12	42	44	225	162	35.3	18.66	10.6	1.7	VII	VII	32.63	115.33
Post Office	Soft	6.6	12	19	22	225	246	44 7	25.27	17.6	6.5	VII	VII	32.63	115.33
Post Office	Soft	6.6	12	19	22	315	213	48.4	22.35	16 0	7.5	VII	VII	32.63	115.33
o Sta 10	Soft	6.6	12	27	30	320	222	42.2	16.69	10.3	5.2	VII	VII	32.63	115 33

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
8.8	6.1	VII	VII	37.11	121.53	CDMG 1411		SMA-1T	37.00	121.52	yes	USGS OF 81-42
9.6	2.5	VII	VII	37.11	121.53	CDMG 1410		SMA-1T	36.99	121.54	yes	USGS OF 81-42
10.2	3.0	VII	VII	37.11	121.53	CDMG 1410		SMA-1T	36.99	121.54	yes	USGS OF 81-42
6.0	1.4	VII	VII	37.11	121.53	CDMG 1409		SMA-1T	36.98	121.56	yes	USGS OF 81-42
7.1	1.7	VII	VII	37.11	121.53	CDMG 1409		SMA-1T	36.98	121.56	yes	USGS OF 81-42
10.2	4.9	VII	VII	32.63	115.33	USGS 5028		SMA-1T	32.83	115.50	yes	USGS OF 80-703
7.7	3.8	VII	VII	32.63	115.33	USGS 5028		SMA-1T	32.83	115.50	yes	USGS OF 80-703
11.2	7.9	VII	VII	32.63	115.33	USGS 942		SMA-1T	32.84	115.49	yes	USGS OF 80-703
11.9	10.0	VII	VII	32.63	115.33	USGS 942		SMA-1T	32.84	115.49	yes	USGS OF 80-703
14.0	7.4	VII	VII	32.63	115.33	USGS 117		S-M32	32.79	115.55	TH	USGS PP 1254
13.0	7.0	VII	VII	32.63	115.33	USGS 117		S-M32	32.79	115.55	TH	USGS PP 1254
17.5	13.2	VII	VII	32.63	115.33	USGS 5054		SMA-1T	32.69	115.34	yes	USGS OF 80-703
19.1	13.3	VII	VII	32.63	115.33	USGS 5054		SMA-1T	32.69	115.34	yes	USGS OF 80-703
11.4	6.9	VII	VII	32.63	115.33	USGS 958		SMA-1T	23.81	115.53	yes	USGS OF 80-703
10.2	6.1	VII	VII	32.63	115.33	USGS 958		SMA-1T	23.81	115.53	yes	USGS OF 80-703
10.2	6.3	VII	VII	32.63	115.33	USGS 952		SMA-1T	32.86	115.47	yes	USGS OF 80-703
14.4	10.2	VII	VII	32.63	115.33	USGS 952		SMA-1T	32.86	115.47	yes	USGS OF 80-703
11 7	6.1	VII	VII	32.63	115.33	USGS 5165		SMA-1T	32.80	115.54	yes	USGS OF 80-703
15.3	7.1	VII	VII	32.63	115.33	USGS 5165		SMA-1T	32.80	115.54	yes	USGS OF 80-703
12.8	7 4	VII	VII	32.63	115.33	USGS 955		SMA-1T	32.86	115.43	yes	USGS OF 80-703
12.3	6 4	VII	VII	32.63	115.33	USGS 955		SMA-1T	32 86	115.43	yes	USGS OF 80-703
11.3	2.2	VII	VII	32.63	115.33	USGS 5060		SMA-1T	32.99	115.51	yes	USGS OF 80-703
10.6	1.7	VII	VII	32.63	115.33	USGS 5060		SMA-1T	32.99	115.51	yes	USGS OF 80-703
7 6	6.5	VII	VII	32.63	115.33	USGS 5055		SMA-1T	32.81	115.38	yes	USGS OF 80-703
16.0	7 5	VII	VII	32.63	115 33	USGS 5055		SMA-1T	32.81	115.38	yes	USGS OF 80-703
10.3	5.2	VII	VII	32.63	115.33	USGS 412		RFT250	32.78	115.57	yes	USGS OF 80-703

(3)

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km
CAL	129	791015	2316	Imperial Valley	ElCentro Sta 10	Soft	6.6	12	27
CAL	130	791015	2316	Imperial Valley	Calexico Fire Station	Soft	6.6	12	15
CAL	131	791015	2316	Imperial Valley	Calexico Fire Station	Soft	6.6	12	15
CAL	132	791015	2316	Imperial Valley	ElCentro Sta 11	Soft	6.6	12	27
CAL	133	791015	2316	Imperial Valley	ElCentro Sta 11	Soft	6.6	12	27
CAL	134	791015	2316	Imperial Valley	ElCentro Sta 3	Soft	6.6	12	28
CAL	135	791015	2316	Imperial Valley	ElCentro Sta 3	Soft	6.6	12	28
CAL	136	791015	2316	Imperial Valley	Parachute Test Site	Soft	6.6	12	47
CAL	137	791015	2316	Imperial Valley	ElCentro Sta 2	Soft	6.6	12	31
CAL	138	791015	2316	Imperial Valley	ElCentro Sta 2	Soft	6.6	12	31
CAL	139*	791015	2316	Imperial Valley	Superstition Mtn/USAF	Rock	6.6	12	57
CAL	140	791015	2316	Imperial Valley	ElCentro Co Service Bldg	Soft	6.6	12	28
CAL	141	791015	2316	Imperial Valley	ElCentro Co Service Bldg	Soft	6.6	12	28
CAL	142	791015	2319	Imp. Vly Aftshk	ElCentro Sta 5	Soft	5.0	12	
CAL	143	791015	2319	Imp. Vly Aftshk	ElCentro Sta 5	Soft	5.0	12	
CAL	144	791015	2319	Imp. Vly Aftshk	ElCentro Sta 6	Soft	5.0	12	
CAL	145	791015	2319	Imp. Vly Aftshk	ElCentro Sta 7	Soft	5.0	12	
CAL	146	791015	2319	Imp. Vly Aftshk	Holtville Post Office	Soft	5.0	12	
CAL	147	791016	425	Imp. Vly Aftshk	ElCentro Sta 5	Soft		12	
CAL	148	791016	425	Imp. Vly Aftshk	ElCentro Sta 5	Soft		12	
CAL	149	791016	425	Imp. Vly Aftshk	Brawley Airport	Soft		12	
CAL	150	791016	425	Imp. Vly Aftshk	Brawley Airport	Soft		12	
CAL	151	800124	1900	Greenville	Del Valle Dam, toe	Hard	5.3	8	25
CAL	152	800126	233	Greenville	Livermore/Morgan Terr Pk	Hard	5.2	7	11
CAL	153	800126	233	Greenville	Livermore/Morgan Terr Pk	Hard	5.2	7	11
CAL	154	800126	233	Greenville	Livermore/Fagundes Ranch	Soft	5.2	7	11

gal or greater or of exceptional interest)

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LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR, deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
› Sta 10	Soft	6.6	12	27	30	50	168	44.3	27.13	12.4	4.8	VII	VII	32.63	115.33
› Fire Station	Soft	6.6	12	15	19	225	270	19.43	5.71	13.2	10.8	VII	VII	32.63	115.33
› Fire Station	Soft	6.6	12	15	19	315	197	16.1	7.05	19.1	9.4	VII	VII	32.63	115.33
› Sta 11	Soft	6.6	12	27	30	230	375	39.21	13.38	11.7	6.5	VII	VII	32.63	115.33
› Sta 11	Soft	6.6	12	27	30	140	355	35.01	14.15	11.7	7.0	VII	VII	32.63	115.33
› Sta 3	Soft	6.6	12	28	30	140	262	46.32	15.35	14.6	6.0	VII	VII	32.63	115.33
Sta 3	Soft	6.6	12	28	30	230	218	36.80	17.91	14.8	6.2	VII	VII	32.63	115.33
te Test Site	Soft	6.6	12	47	49	315	200	14.62	7.87	10.0	1.5	VII	VII	32.63	115.33
Sta 2	Soft	6.6	12	31	33	230	406	26.51	12.99	12.9	5.8	VII	VII	32.63	115.33
Sta 2	Soft	6.6	12	31	33	140	309	31.21	9.93	14.3	6.7	VII	VII	32.63	115.33
tion Mtn/USAF	Rock	6.6	12	57	58	135	189	9.02	1.72	4.9	1.0	VII	VII	32.63	115.33
Co Service Bldg	Soft	6.6	12	28	30	92	231	64.4	28.24	11.3	8.8	VII	VII	32.63	115.33
Co Service Bldg	Soft	6.6	12	28	30	2	209	36.20	16.43	15.0	4.6	VII	VII	32.63	115.33
Sta 5	Soft	5.0	12				280				0.2		VI		
Sta 5	Soft	5.0	12				230				0.3		VI		
Sta 6	Soft	5.0	12				250				1.3		VI		
Sta 7	Soft	5.0	12				225				0.4		V		
Post Office	Soft	5.0	12				258				0.3		VI		
Sta 5	Soft		12				192				0.3		V		
Sta 5	Soft		12				198				0.2		V		
Airport	Soft		12				267				0.9		VI		
Airport	Soft		12				260				1.2		VI		
Dam, toe	Hard	5.3	8	25	26		235				2.8	VII	VI	37.85	121.82
s/Morgan Terr Pk	Hard	5.2	7	11	13		265				1.5	VII	VI	37.76	121.70
s/Morgan Terr Pk	Hard	5.2	7	11	13		190				1.5	VII	VI	37.76	121.70
s/Fagundes Ranch	Soft	5.2	7	11	13		245				1.0	VII	VI	37.76	121.70

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
12.4	4.8	VII	VII	32.63	115.33	USGS 412		RFT250	32.78	115.57	yes	USGS OF 80-703
13.2	10.8	VII	VII	32.63	115.33	USGS 5053		SMA-1T	32.67	115.49	yes	USGS OF 80-703
19.1	9.4	VII	VII	32.63	115.33	USGS 5053		SMA-1T	32.67	115.49	yes	USGS OF 80-703
11.7	6.5	VII	VII	32.63	115.33	USGS 5058		SMA-1T	32.75	115.59	yes	USGS OF 80-703
11.7	7.0	VII	VII	32.63	115.33	USGS 5058		SMA-1T	32.75	115.59	yes	USGS OF 80-703
14.6	6.0	VII	VII	32.63	115.33	USGS 5057		SMA-1T	32.89	115.38	yes	USGS OF 80-703
14.8	6.2	VII	VII	32.63	115.33	USGS 5057		SMA-1T	32.89	115.38	yes	USGS OF 80-703
10.0	1.5	VII	VII	32.63	115.33	USGS 5051		SMA-1T	32.93	115.70	yes	USGS OF 80-703
12.9	5.8	VII	VII	32.63	115.33	USGS 5115		SMA-1T	32.92	115.37	yes	USGS OF 80-703
14.3	6.7	VII	VII	32.63	115.33	USGS 5115		SMA-1T	32.92	115.37	yes	USGS OF 80-703
4.9	1.0	VII	VII	32.63	115.33	USGS 286		SMA-1T	32.95	115.82	yes	USGS OF 80-703
11.3	8.8	VII	VII	32.63	115.33	CDMG 5154	Freefld	SMA-1T	32.79	115.56	yes	CDMG SP65
15.0	4.6	VII	VII	32.63	115.33	CDMG 5154	Freefld	SMA-1T	32.79	115.56	yes	CDMG SP65
	0.2		VI			USGS 952		SMA-1T	32.86	115 47	no	USGS PP 1254
	0 3		VI			USGS 952		SMA-1T	32.86	115.47	no	USGS PP 1254
	1.3		VI			USGS 942		SMA-1T	32.84	115.49	no	USGS PP 1254
	0.4		V			USGS 5028		SMA-1T	32.83	115.50	no	USGS PP 1254
	0 3		VI			USGS 5055		SMA-1T	32.81	115.38	no	USGS PP 1254
	0.3		V			USGS 952		SMA-1T	32.86	115 47	no	USGS PP 1254
	0.2		V			USGS 952		SMA-1T	32.86	115.47	no	USGS PP 1254
	0 9		VI			USGS 5060		SMA-1T	32.99	115.51	no	USGS PP 1254
	1 2		VI			USGS 5060		SMA-1T	32.99	115.51	no	USGS PP 1254
	2.8	VII	VI	37.85	121.82	USGS 1265			37 62	121 75	TH	Cal Dept Wtr Res
	1 5	VII	VI	37.76	121.70	CDMG Temp		SMA-1T	37.82	121 45	TH	CDMG PR28
	1 5	VII	VI	37.76	121.70	CDMG Temp		SMA-1T	38.82	121 45	TH	CDMG PR28
	1.0	VII	VI	37 76	121 70	CDMG Temp		SMA-1T	37 75	121 77	TH	CDMG PR28

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km
CAL	155	800126	233	Greenville	Livermore/Fagundes Ranch	Soft	5.2	7
CAL	156	800225	1047	Anza Valley	Puerta La Cruz	Hard	5.1	6
CAL	157	800525	1734	Mammoth Lakes	Convict Creek	Hard	6.5	9
CAL	158	800525	1734	Mammoth Lakes	Convict Creek	Hard	6.5	9
CAL	159	800525	1734	Mammoth Lakes	Mammoth Lakes HS Gym	Soft	6.5	9
CAL	160	800525	1734	Mammoth Lakes	Mammoth Lakes HS Gym	Soft	6.5	9
CAL	161	800525	1734	Mammoth Lakes	Mammoth Lakes HS Gym	Soft	6.5	9
CAL	162	800525	1749	Mamm Lk AftShk 1	Mammoth Lakes HS Gym	Soft	6.0	14
CAL	163	800525	1749	Mamm Lk AftShk 1	Mammoth Lakes HS Gym	Soft	6.0	14
CAL	164	800525	1749	Mamm Lk AftShk 1	Mammoth Lakes HS Gym	Soft	6.0	14
CAL	165	800525	1749	Mamm Lk AftShk 1	Convict Creek	Hard	6.0	14
CAL	166	800525	1749	Mamm Lk AftShk 1	Convict Creek	Hard	6.0	14
CAL	167	800525	2045	Mamm Lk AftShk 2	Convict Creek	Hard	6.7	16
CAL	168	800525	2045	Mamm Lk AftShk 2	Convict Creek	Hard	6.7	16
CAL	169	800527	1551	Mamm Lk AftShk 3	Convict Creek	Hard	6.3	14
CAL	170	800527	1551	Mamm Lk AftShk 3	Convict Creek	Hard	6.3	14
CAL	171	800527	1551	Mamm Lk AftShk 3	Long Vly Dam, dwnstrm	Hard	6.3	14
CAL	172	800527	1551	Mamm Lk AftShk 3	Long Vly Dam, dwnstrm	Hard	6.3	14
CAL	173	810426	1209	Westmorland	Niland Fire Station	Soft	5.6	8
CAL	174	810426	1209	Westmorland	Westmorland Fire Sta	Soft	5.6	8
CAL	175	810426	1209	Westmorland	Westmorland Fire Sta	Soft	5.6	8
CAL	176	810426	1209	Westmorland	Parachute Test, ElCentro	Soft	5.6	8
CAL	177	810426	1209	Westmorland	Salton Sea	Soft	5.6	8
CAL	178	810426	1209	Westmorland	Salton Sea	Soft	5.6	8
CAL	179	810930	1253	LaurelCk(Mammoth)	Convict Creek	Soft	5.8	14
CAL	180	810930	1253	LaurelCk(Mammoth)	Convict Creek	Soft	5.8	14

) gal or greater or of exceptional interest)

David J. Leeds
DJLA 90-21-14

LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYF km	TR deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LO
ore/Fagundes Ranch	Soft	5.2	7	11	13		216				1.0	VII	VI	37.76	121.
La Cruz	Hard	5.1	6	22	23		235					VI	VI	33.52	116.
t Creek	Hard	6.5	9	2	9	180	392	23.1	5.37	13.8	10.4	VII	VII	37.61	118.
t Creek	Hard	6.5	9	2	9	90	402	22.4	5.12	13.8	11.0	VII	VII	37.61	118.
oth Lakes HS Gym	Soft	6.5	9	11	14	270	304	15.8	2.44	13.3	6.6	VII	VII	37.61	118.
oth Lakes HS Gym	Soft	6.5	9	11	14	360	238	15.3	2.17	11.7	8.8	VII	VII	37.61	118.
oth Lakes HS Gym	Soft	6.5	9	11	14	360	246	15.8	2.05	11.9	8.8	VII	VII	37.61	118.
oth Lakes HS Gym	Soft	6.0	14	11	14	270	372	23.2	1.88	6.5	2.3	VII	VII	37.63	118.
oth Lakes HS Gym	Soft	6.0	14	11	14	360	383	23.6	2.82	6.5	3.5	VII	VII	37.63	118.
oth Lakes HS Gym	Soft	6.0	14	11	14	360	413	26.8	3.18	6.5	4.3	VII	VII	37.63	118.
t Creek	Hard	6.0	14	9	17	180	177	13.6	2.61	5.2	2.3	VII	VI	37.63	118.
t Creek	Hard	6.0	14	9	17	90	158	11.8	1.85	4.2	2.7	VII	VI	37.63	118.
t Creek	Hard	6.7	16	6	17	180	180	15.8	2.49	6.2	3.2	VI	VI	37.56	118.
t Creek	Hard	6.7	16	6	17	90	223	18.2	4.22	5.8	3.3	VI	VII	37.56	118.
t Creek	Hard	6.3	14	12	18	180	288	15.6	2.84	6.0	4.7	VI	VI	37.51	118.
t Creek	Hard	6.3	14	12	18	90	248	18.6	1.48	6.7	3.2	VI	VI	37.51	118.
ly Dam, dwnstrm	Hard	6.3	14	15	21	90	176	17.7	2.86	5.0	0.6	VI	VI	37.51	118.
ly Dam, dwnstrm	Hard	6.3	14	15	21	360	207	8.01	2.86	6.7	0.7	VI	VI	37.51	118.
Fire Station	Soft	5.6	8	8	11	90	159	7.2	0.71	5.5	2.6	VIII	VI	33.13	115.
orland Fire Sta	Soft	5 6	8	8	11	180	466	35.8	11.3	9.0	5.3	VIII	VIII	33.13	115.
orla nd Fire Sta	Soft	5 6	8	8	11	90	377	43.5	13.3	8.3	7.4	VIII	VIII	33.13	115.
ite Test, ElCentro	Soft	5 6	8	8	11		225				2.4	VIII	VII	33 13	115.
Sea	Soft	5 6	8	9	12		186				6.1	VIII	VII	33.13	115
Sea	Soft	5.6	8	9	12		196				6.1	VIII	VII	33.13	115.
t Creek	Soft	5.8	14	6	15		255					VI	VI	37.59	118.
t Creek	Soft	5 8	14	6	15		206					VI	VI	37.59	118.

s
14

Sep 11, 1990

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
	1.0	VII	VI	37.76	121.70	CDMG Temp		SMA-1T	37.75	121.77	TH	CDMG PR28
		VI	VI	33.52	116.53	CDMG 168	GS 933	SMA-1T	33.32	116.68	TH	CDMG Prelim Data
3.8	10.4	VII	VII	37.61	118.85	CDMG 99		SMA-1T	37.82	118.48	yes	CDMG Tape Printout
3.8	11.0	VII	VII	37.61	118.85	CDMG 99		SMA-1T	37.82	118.48	yes	CDMG Tape Printout
3.3	6.6	VII	VII	37.61	118.85	CDMG 301	GS 1490	CR1	37.64	118.96	yes	CDMG Tape Printout
..7	8.8	VII	VII	37.61	118.85	CDMG 301	GS 1490	CR1	37.64	118.96	yes	CDMG Tape Printout
.9	8.8	VII	VII	37.61	118.85	CDMG 301	GS 1490	CR1	37.64	118.96	yes	CDMG Tape Printout
3.5	2.3	VII	VII	37.63	118.97	CDMG 301	GS 1490	CR1	37.64	118.96	yes	CDMG Tape Printout
3.5	3.5	VII	VII	37.63	118.97	CDMG 301	GS 1490	CR1	37.64	118.96	yes	CDMG Tape Printout
3.5	4.3	VII	VII	37.63	118.97	CDMG 301	GS 1490	CR1	37.64	118.96	yes	CDMG Tape Printout
..2	2 3	VII	VI	37.63	118.97	CDMG 99	GS 1324	SMA-1T	37.82	118.48	yes	CDMG Tape Printout
2	2.7	VII	VI	37.63	118.97	CDMG 99	GS 1324	SMA-1T	37.82	118.48	yes	CDMG Tape Printout
.2	3.2	VI	VI	37.56	118.84	CDMG 99	GS 1324	SMA-1T	37 82	118.48	yes	CDMG Tape Printout
8	3.3	VI	VII	37.56	118.84	CDMG 99	GS 1324	SMA-1T	37 82	118.48	yes	CDMG Tape Printout
0	4.7	VI	VI	37.51	118.83	CDMG 99	GS 1324	SMA-1T	37 82	118 48	yes	CDMG Tape Printout
7	3.2	VI	VI	37.51	118.83	CDMG 99	GS 1324	SMA-1T	37.82	118.48	yes	CDMG Tape Printout
0	0.6	VI	VI	37.51	118.83	CDMG 214	GS 1444	CR1	37 59	118 71	yes	CDMG Tape Printout
7	0.7	VI	VI	37.51	118.83	CDMG 214	GS 1444	CR1	37.59	118.71	yes	CDMG Tape Printout
5	2 6	VIII	VI	33.13	115 65	CDMG 023		SMA-1T	33 24	115 51	yes	CDMG OSMS 81-5 1
0	5.3	VIII	VIII	33.13	115.65	CDMG 369		SMA-1T	33.04	115.62	yes	CDMG OSMS 81-5 1
3	7 4	VIII	VIII	33 13	115.65	CDMG 369		SMA-1T	33 04	115 62	yes	CDMG OSMS 81-5 1
	2.4	VIII	VII	33 13	115.65	USGS 5051			32 93	115 70	TH	USGS Circ 914
	6 1	VIII	VII	33.13	115 65	USGS 5062			33 18	115 62	TH	USGS Circ 914
	6.1	VIII	VII	33.13	115.65	USGS 5062			33 18	115 62	TH	USGS Circ 914
		VI	VI	37 59	118 89	CDMG 2593		SMA-1T	37 61	118 83	TH	CDMG OSMS 81-10 1
		VI	VI	37 59	118.89	CDMG 2593		SMA-1T	37 61	118 83	TH	CDMG OSMS 81-10 1

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km
CAL	181	830107	138	Mammoth Lakes	Mammoth Lakes HS Gym	Soft	5.2	14
CAL	182	830107	138	Mammoth Lakes	Mammoth Lakes HS Gym	Soft	5.2	14
CAL	183	830502	2342	Coalinga	PlstVly PumpPlt Switchyd	Soft	6.7	11
CAL	184	830502	2342	Coalinga	PlstVly PumpPlt Switchyd	Soft	6.7	11
CAL	185	830502	2342	Coalinga	PlstVly PumpPlt Bsmt	Soft	6.7	11
CAL	186	830502	2342	Coalinga	PlstVly PumpPlt Bsmt	Soft	6.7	11
CAL	187	830502	2342	Coalinga	Cantua Creek School	Soft	6.7	11
CAL	188	830502	2342	Coalinga	Cantua Creek School	Soft	6.7	11
CAL	189	830502	2342	Coalinga	Parkfield Array FZ 14	Hard	6.7	11
CAL	190	830502	2342	Coalinga	Parkfield Array FZ 14	Hard	6.7	11
CAL	191	830502	2342	Coalinga	Pkfld Vineyard Cyn 1E	Hard	6.7	11
CAL	192	830502	2342	Coalinga	Pkfld Vineyard Cyn 1E	Hard	6.7	11
CAL	193	830509	249	Coalinga AftShk 1	Coalga Anticl.Ridge, FF		5.1	13
CAL	194	830509	249	Coalinga AftShk 1	Coalga Anticl.Ridge, FF		5.1	13
CAL	195	830509	249	Coalinga AftShk 1	Coalga Anticl.Ridge, pad		5.1	13
CAL	196	830509	249	Coalinga AftShk 1	Coalga Anticl.Ridge, pad		5.1	13
CAL	197	830509	249	Coalinga AftShk 1	Coalinga Big Tank		5.1	13
CAL	198	830509	249	Coalinga AftShk 1	Coalinga Oil City		5.1	13
CAL	199	830509	249	Coalinga AftShk 1	Coalinga Oil City		5.1	13
CAL	200	830509	249	Coalinga AftShk 1	Coalga Oilfids FSta, FF		5.1	13
CAL	201	830509	249	Coalinga AftShk 1	Coalga Oilfids FSta, pad		5.1	13
CAL	202	830509	249	Coalinga AftEvt 2	Oilfields-Skunk Hollow	Hard	5.1	13
CAL	203	830509	249	Coalinga AftEvt 2	Oilfields-Skunk Hollow	Hard	5 1	13
CAL	204	830509	249	Coalinga AftEvt 2	Anticline Ridge-Palmer Av	Hard	5 1	13
CAL	205	830509	249	Coalinga AftEvt 2	Anticline Ridge-Palmer Av	Hard	5.1	13
CAL	206	830509	249	Coalinga AftShk 1	PlstVly PumpPlt Switchyd	Soft	5 1	13

)0 gal or greater or of exceptional interest)

David J. Leeds
DJLA 90-21-14

LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR. deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LON
noth Lakes HS Gym	Soft	5.2	14	4	15		255					VI	VI	37.63	118.9
noth Lakes HS Gym	Soft	5.2	14	4	15		196					VI	VI	37.63	118.9
y PumpPlt Switchyd	Soft	6.7	11	9	14	135	514	39.2	5.05	17.9	14.2	VIII	VIII	36.23	120.2
y PumpPlt Switchyd	Soft	6.7	11	9	14	45	441	50.0	15.46	17.5	11.4	VIII	VIII	36.23	120.2
y PumpPlt Bsmt	Soft	6.7	11	9	14	135	267	21.71	3.86	12.3	6.5	VIII	VIII	36.23	120.2
y PumpPlt Bsmt	Soft	6.7	11	9	14	45	307	36.7	10.54	12.0	9.6	VIII	VIII	36.23	120.2
a Creek School	Soft	6.7	11	29	31	360	292	26.4	9.74	12.2	7.9	VIII	VI	36.23	120.2
a Creek School	Soft	6.7	11	29	31	270	219	25.8	9.36	12.9	8.0	VIII	VI	36.23	120.2
ld Array FZ 14	Hard	6.7	11	41	42	90	268	28.3	5.45	15.8	6.9	VIII	VI	36.23	120.2
ld Array FZ 14	Hard	6.7	11	41	42	360	256	34.3	8.91	12.2	6.1	VIII	VI	36.23	120.2
Vineyard Cyn 1E	Hard	6.7	11	37	39	90	224	27.9	6.17	8.3	4.2	VIII	VI	36.23	120.2
Vineyard Cyn 1E	Hard	6.7	11	37	39	360	173	18.3	5.14	8.6	3.5	VIII	VI	36.23	120.2
Anticl.Ridge, FF		5.1	13				549				1.4			36.23	120.3
Anticl.Ridge, FF		5.1	13				549				1.4			36.23	120.3
Anticl.Ridge, pad		5.1	13				470				0.8			36.23	120.3
Anticl.Ridge, pad		5.1	13				461				1.3			36.23	120.3
ga Big Tank		5.1	13	3	13		294							36.23	120.3
ga Oil City		5.1	13				234				0.9			36.23	120.3
ga Oil City		5.1	13				235				0.5			36.23	120.3
Oilflds FSta, FF		5.1	13				245				0.4			36.23	120.3
Oilflds FSta, pad		5.1	13				216							36.23	120.3
s-Skunk Hollow	Hard	5.1	13	6	14	90	329	9.4	0.57	1.2	0.7		VII	36.23	120.3
s-Skunk Hollow	Hard	5.1	13	6	14	360	260	9.5	0.53	1.1	0.5		VII	36.23	120.3
ne Ridge-Palmer Av	Hard	5.1	13	3	13	90	191	8.2	0.70	0.8	0.5		VI	36.23	120.3
ne Ridge-Palmer Av	Hard	5.1	13	3	13	360	267	12.1	1.07	1.0	0.6		VII	36.23	120.3
PumpPlt Switchyd	Soft	5.1	13	16	21		216						VI	36.23	120.3

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
		VI	VI	37.63	118.93	CDMG54301			37.64	118.96	TH	
		VI	VI	37.63	118.93	CDMG54301			37.64	118.96	TH	
17.9	14.2	VIII	VIII	36.23	120.29	USGS			36.31	120.25	yes	USGS/EERI
17.5	11.4	VIII	VIII	36.23	120.29	USGS			36.31	120.25	yes	USGS/EERI
12.3	6.5	VIII	VIII	36.23	120.29	USGS			36.31	120.25	yes	USGS/EERI
12.0	9.6	VIII	VIII	36.23	120.29	USGS			36.31	120.25	yes	USGS/EERI
12.2	7.0	VIII	VI	36 23	120.29	CDMG46314			36.50	120.32	yes	CDMG Printout
12 9	8.0	VIII	VI	36.23	120.29	CDMG46314			36.50	120.32	yes	CDMG Printout
15.8	6.9	VIII	VI	36.23	120.29	CDMG36456			35.91	120.46	yes	CDMG Printout
12.2	6.1	VIII	VI	36.23	120.29	CDMG36456			35.91	120.46	yes	CDMG Printout
8.3	4.2	VIII	VI	36.23	120.29	CDMG36455			35.96	120.48	yes	CDMG Printout
8 6	3.5	VIII	VI	36.23	120.29	CDMG36455			35.96	120.48	yes	CDMG Printout
	1.4			36.23	120.31	USGS Temp		SMA-1	36.23	120.33	no	USGS Cir. 971
	1.4			36.23	120.31	USGS Temp		SMA-1	36.23	120.33	no	USGS Cir 971
	0.8			36.23	120.31	USGS Temp		SMA-1	36.23	120.33	no	USGS Cir. 971
	1.3			36.23	120.31	USGS Temp		SMA-1	36.23	120.33	no	USGS Cir. 971
				36.23	120.31	CIT Temp		SMAT			no	
	0.9			36.23	120.31	USGS Temp		SMA 1	36.23	120.36	no	USGS Cir. 971
	0.5			36.23	120.31	USGS Temp		SMA-1	36.23	120.36	no	USGS Cir. 971
	0 4			36.23	120.31	USGS Temp		SMA-1	36.25	120.31	no	USGS Cir. 971
				36.23	120.31	USGS Temp		SMA-1	36 31	120.25	no	USGS Cir. 971
1 2	0.7		VII	36 23	120.31	CDMG			36 28	120 31	yes	CDMG Printout
1 1	0.5		VII	36.23	120.31	CDMG			36.28	120.31	yes	CDMG Printout
0.8	0 5		VI	36.23	120.31	CDMG			36.21	120.31	yes	CDMG Printout
1.0	0.6		VII	36.23	120.31	CDMG			36 21	120 31	yes	CDMG Printout
			VI	36.23	120.31	CDMG		SMA-1	36.31	120 25	no	USGS Cir 971

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km
CAL	207	830509	249	Coalinga AftShk 1	Coalinga Twin Tanks		5.1	13	4
CAL	208	830509	249	Coalinga AftShk 1	Coalinga Palmer Ave		5.1	13	3
CAL	209	830722	240	Coalinga AftEvt 5	Coalinga CHP	Soft	6.0	10	10
CAL	210	830722	240	Coalinga AftEvt 5	Coalinga CHP	Soft	6.0	10	10
CAL	211	830722	343	Coalinga AftEvt 6	Coalinga CHP	Soft	5.0	10	9
CAL	212	830725	2231	Coalinga AftEvt 7	Coalinga CHP	Soft	5.1	10	9
CAL	213	830725	223	Coalinga AftEvt 7	Coalinga CHP	Soft	5.1	10	9
CAL	214	830725	2231	Coalinga AftEvt 7	Coalinga Sulphur Baths	Hard	5.1	10	10
CAL	215	830911	1148	Coalinga AftEvt 9	Coalinga CHP	Soft	4.3	10	9
CAL	216	840424	2115	Morgan Hill	Gilroy 7, Mantelli Ranch	Hard	6.2	9	39
CAL	217	840424	2115	Morgan Hill	Gilroy 6, San Ysidro	Hard	6.2	9	38
CAL	218	840424	2115	Morgan Hill	Gilroy 6, San Ysidro	Hard	6.2	9	38
CAL	219	840424	2115	Morgan Hill	Gilroy 4, San Ysidro Sch	Soft	6.2	9	37
CAL	220	840424	2115	Morgan Hill	Gilroy 4, San Ysidro Sch	Soft	6.2	9	37
CAL	221	840424	2115	Morgan Hill	Gilroy 3, Sewage Plant	Soft	6.2	9	38
CAL	222	840424	2115	Morgan Hill	Gilroy 3, Sewage Plant	Soft	6.2	9	38
CAL	223	840424	2115	Morgan Hill	Gilroy 2, Hwy 101 Motel	Soft	6.2	9	38
CAL	224	840424	2115	Morgan Hill	Gilroy 2, Hwy 101 Motel	Soft	6.2	9	38
CAL	225	840424	2115	Morgan Hill	MH Anderson Dam, dwnstrm	Hard	6.2	9	16
CAL	226	840424	2115	Morgan Hill	MH Anderson Dam, dwnstrm	Hard	6.2	9	16
CAL	227	840424	2115	Morgan Hill	Halls Vly, Grant Ranch	Soft	6.2	9	4
CAL	228	840424	2115	Morgan Hill	Coyote Lk Dam, SW abut.	Hard	6.2	9	24
CAL	229	840424	2115	Morgan Hill	Coyote Lk Dam, SW abut.	Hard	6.2	9	24
CAL	230	841123	1800	Bishop	Bishop Paradise Lodge	Hard	6.1	13	3
CAL	231	841123	1800	Bishop	Bishop Paradise Lodge	Hard	6.1	13	3

gal or greater or of exceptional interest)

David J. Leeds
DJLA 90-21-14

LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR. deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
Twin Tanks		5.1	13	4	14		216							36.23	120.31
Palmer Ave		5.1	13	3	13		255				0.8			36.23	120.31
CHP	Soft	6.0	10	10	14	90	507	28.1	2.66	6.2	2.8		XI	36.23	120.42
CHP	Soft	6.0	10	10	14	360	352	17.7	2.14	6.1	3.1		VIII	36.23	120.42
CHP	Soft	5.0	10	9	13	90	206	9.9	0.90	1.0	0.3		VII	36.21	120.41
CHP	Soft	5.1	10	9	13	90	654	35.3	3 68	5.6	1.0		IX	36.22	120.41
CHP	Soft	5.1	10	9	13	360	453	14.3	1.09	4.5	0.8		IX	36.22	120.41
Sulphur Baths	Hard	5.1	10	10	14	90	193	12.4	1.29	0.5	0.3		VI	36.22	120.41
CHP	Soft	4.3	10	9	13	90	425	15.8	1.02	1.0	0.7		IX	36.23	120.39
Mantelli Ranch	Hard	6.2	9	39	40	360	183	6.6	0.6	9.9	4.8	VIII	VII	37.32	121.68
San Ysidro	Hard	6.2	9	38	39	90	280	36.6	5.24	10.0	5.8	VIII	VII	37.32	121.68
San Ysidro	Hard	6.2	9	38	39	360	215	11.3	1.81	7.6	1.2	VIII	VII	37.32	121.68
San Ysidro Sch	Soft	6.2	9	37	38	360	329	16.7	3 02	12.7	9.3	VIII	VII	37.32	121.68
San Ysidro Sch	Soft	6.2	9	37	38	270	217	19.2	2.99	13.7	7.4	VIII	VII	37.32	121.68
Sewage Plant	Soft	6.2	9	38	39	90	190	11.9	2.58	12.8	2.2 4.	VIII	VII	37.32	121.68
Sewage Plant	Soft	6.2	9	38	39	360	177	11.0	2.47	7.3	4 5	VIII	VII	37.32	121.68
Hwy 101 Motel	Soft	6.2	9	38	39	90	210	12.5	1.98	7.4	1.0	VIII	VII	37.32	121.68
Hwy 101 Motel	Soft	6.2	9	38	39	360	154	5.0	1.12	8.1	0.1	VIII	VII	37.32	121.68
ərson Dam, dwnstrm	Hard	6.2	9	16	18	340	283	27.6	5.75	9.0	4.0	VIII	VII	37.32	121.68
ərson Dam, dwnstrm	Hard	6.2	9	16	18	250	416	24 7	4.47	9.7	4.4	VIII	VII	37.32	121.68
, Grant Ranch	Soft	6.2	9	4	10	240	306	39.6	6.56	11.6	10.4	VIII	VIII	37.32	121.68
k Dam, SW abut.	Hard	6.2	9	24	26	285	1138	79.7	10.5	8.6	6.4	vIII	VIII	37.32	121.68
k Dam, SW abut.	Hard	6 2	9	24	26	195	640	51.9	10.3	8.8	4.6	VIII	VIII	37.32	121.68
aradise Lodge	Hard	6 1	13	3	13		235					V	V	37.46	118.59
aradise Lodge	Hard	6.1	13	3	13		196					V	V	V	118.59

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
				36.23	120.31	CIT Temp		SMAT			no	
	0.8			36.25	120.31	USGS Temp		SMA-1	36.21	120.29	TH	CDMG SP 66
6.2	2.8		XI	36.23	120.42	CDMG			36.15	120.35	yes	CDMG Printout
6.1	3.1		VIII	36.23	120.42	CDMG			36.15	120.35	yes	CDMG Printout
1.0	0.3		VII	36.21	120.41	CDMG			36.15	120.35	yes	CDMG Printout
5.6	1.0		IX	36.22	120.41	CDMG			36.15	120.35	yes	CDMG Printout
4.5	0 8		IX	36.22	120.41	CDMG			36.15	120.35	yes	CDMG Printout
0.5	0.3		VI	36.22	120.41	CDMG			36.12	120.40	yes	CDMG Printout
1.0	0.7		IX	36.23	120.39	CDMG			36.15	120.35	yes	CDMG Printout
9.9	4 8	VIII	VII	37.32	121.68	CDMG57425		SMA	37.03	121.43	yes	CDMG OSMS 85-04
10.0	5.8	VIII	VII	37.32	121.68	CDMG57383			37.03	121.48	yes	CDMG OSMS 85-04
7.6	1.2	VIII	VII	37.32	121.68	CDMG57383			37.03	121.48	yes	CDMG OSMS 85-04
2.7	9.3	VIII	VII	37.32	121.68	CDMG57382		SMA	37.01	121.52	yes	CDMG OSMS 85-04
3.7	7.4	VIII	VII	37.32	121.68	CDMG57382		SMA	37.01	121.52	yes	CDMG OSMS 85-04
2 8	2.2 4	VIII	VII	37.32	121.68	CDMG47381		SMA	37.01	121.52	yes	CDMG OSMS 85-04
7.3	4.5	VIII	VII	37.32	121.68	CDMG47381		SMA	37.01	121.52	yes	CDMG OSMS 85-04
7 4	1.0	VIII	VII	37.32	121.68	CDMG47380		SMA	36.98	121.56	yes	CDMG OSMS 85-04
8.1	0.1	VIII	VII	37.32	121.68	CDMG47380		SMA	36.98	121.56	yes	CDMG OSMS 85-04
9.0	4.0	VIII	VII	37.32	121.68	USGS			37.17	121.63	yes	USGS OF 84-498
9 7	4.4	VIII	VII	37.32	121.68	USGS			37.17	121.63	yes	USGS OF 84-498
1 6	10 4	VIII	VIII	37.32	121.68	CDMG57191		SMA	37.34	121.71	yes	CDMG OSMS 85-04
3 6	6 4	VIII	VIII	37.32	121.68	CDMG57217		SMA	37.32	121.55	yes	CDMG OSMS 85-04
3.8	4 6	VIII	VIII	37.32	121.68	CDMG57217		SMA	37.32	121.55	yes	CDMG OSMS 85-04
		V	V	37.46	118.59	CDMG54424			37.48	118.60	TH	
		V	V	V	118.59	CDMG54424			37.48	118 60	TH	

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	E k
CAL	232	860708	920	No. Palm Springs	San Jacinto/Soboba	Soft	6.0	12	
CAL	233	860708	920	No. Palm Springs	San Jacinto/Soboba	Soft	6.0	12	
CAL	234	860708	920	No. Palm Springs	North Palm Springs		6.0	12	
CAL	235	860708	920	No. Palm Springs	North Palm Springs		6.0	12	
CAL	236	860708	920	No. Palm Springs	Palm Springs Airport	Soft	6.0	12	
CAL	237	860708	920	No. Palm Springs	Desert Hot Springs	Soft	6.0	12	
CAL	238	860708	920	No. Palm Springs	Desert Hot Springs	Soft	6.0	12	
CAL	239	860708	920	No. Palm Springs	White Water Trout Farm		6.0	12	
CAL	240	860708	920	No. Palm Springs	White Water Trout Farm		6.0	12	
CAL	241	860708	920	No. Palm Springs	Morongo Valley		6.0	12	
CAL	242	860708	920	No. Palm Springs	Morongo Valley		6.0	12	
CAL	243	860708	920	No. Palm Springs	Devers Substation	Soft	6.0	12	
CAL	244	860708	920	No. Palm Springs	Devers Substation	Soft	6.0	12	
CAL	245	871001	1442	Whittier Narrows	Whittier Narrows Dam	Soft	5.9	9	
CAL	246	871001	1442	Whittier Narrows	Whittier Narrows Dam	Soft	5.9	9	
CAL	247	871001	1442	Whittier Narrows	San Marino SW Academy	Soft	5.9	9	
CAL	248	871001	1442	Whittier Narrows	Whittier 7215 Bright	Soft	5.9	9	
CAL	249	871001	1442	Whittier Narrows	Whittier 7215 Bright	Soft	5.9	9	
CAL	250	871001	1442	Whittier Narrows	Garvey Reservoir, abut.	Hard	5.9	9	
CAL	251	871001	1442	Whittier Narrows	Garvey Reservoir, abut.	Hard	5.9	9	
CAL	252	871001	1442	Whittier Narrows	Alhambra Fremont Sch	Soft	5.9	9	
CAL	253	871001	1442	Whittier Narrows	Alhambra Fremont Sch	Soft	5.9	9	
CAL	254	871001	1442	Whittier Narrows	CSULA Admin Bldg	Hard	5.9	9	
CAL	255	871001	1442	Whittier Narrows	CSULA Admin Bldg	Hard	5.9	9	
CAL	256	871001	1442	Whittier Narrows	Alhambra 900 S Fremont		5.9	9	
CAL	257	871001	1442	Whittier Narrows	Alhambra 900 S Fremont		5.9	9	

O gal or greater or of exceptional interest)

David J. Leeds
DJLA 90-21-14

LOCATION	L TE CHAR	MAG	DEP km	EPI km	HYP km	TR. deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LON
ıcinto/Soboba	Soft	6.0	12	34	36	90	238	9.3	1.06	6.6	1.7	VII	VI	34.00	116.6
ıcinto/Soboba	Soft	6.0	12	34	36	360	238	9.5	1.10	5.3	1.5	VII	VI	34.00	116.6
Palm Springs		6.0	12	8	14		680					VII	VII	34.00	116.6
Palm Springs		6.0	12	8	14		460					VII	VII	34.00	116.6
Springs Airport	Soft	6.0	12	21	24	90	168	11.5	2.43	15.5	2.8	VII	VI	34.00	116.6
Hot Springs	Soft	6.0	12	10	16	90	264	18.5	4.34	10.0	6.5	VII	VI	34.00	116.6
Hot Springs	Soft	6.0	12	10	13	360	294	33.9	7.21	11.8	7.3	VII	VI	34.00	116.6
Water Trout Farm		6.0	12	6	13		598					VII	VII	34.00	116.6
Water Trout Farm		6.0	12	6	13		490					VII	VII	34.00	116.6
go Valley		6.0	12	10	16		220					VII	VI	34.00	116.6
go Valley		6.0	12	10	16		220					VII	VI	34.00	116.6
Substation	Soft	6.0	12	2	12	360	970	86.0	11.61	15.0	14.5	VII	VII	34.00	116.6
Substation	Soft	6.0	12	2	12	270	720	33.0	3.00	14.5	6.4	VII	VII	34.00	116.6
r Narrows Dam	Soft	5.9	9	4	10		310				5.0	VIII	VIII	34.06	118.0
r Narrows Dam	Soft	5.9	9	4	10		240				5.0	VIII	VIII	34.06	118.0
anno SW Academy	Soft	5.9	9	8	12	360	184	12.9	2.11	5.5	2.6	VIII	VII	34.06	118.0
r 7215 Bright	Soft	5.9	9	10	13		630				3.0	VIII	VIII	34.06	118.0
r 7215 Bright	Soft	5.9	9	10	13		400				2.4	VIII	VIII	34.06	118.0
Reservoir, abut.	Hard	5.9	9	3	9		470				3.1	VIII	VIII	34.06	118.0
Reservoir, abut.	Hard	5.9	9	3	9		330				2.8	VIII	VIII	34.06	118.0
ora Fremont Sch	Soft	5.9	9	7	11	270	374	16.9	1.62	6.4	3.7	VIII	VIII	34.06	118.0
ora Fremont Sch	Soft	5.9	9	7	11	180	286	21.7	2.44	6.8	3.3	VIII	VIII	34.06	118.0
Admin Bldg	Hard	5.9	9	9	12		390				6.0	VIII	VII	34.06	118.0
Admin Bldg	Hard	5.9	9	9	12		300				2.2	VIII	VII	34.06	118.0
ora 900 S Fremont		5.9	9	8	12		300					VIII	VII	34.06	118.0
ora 900 S Fremont		5.9	9	8	12		260					VIII	VII	34.06	118.0

eds
1-14

Sep 11, 1990

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
6.6	1.7	VII	VI	34.00	116.61	CDMG12204		SMA-1	33.80	116.81	yes	CDMG OSMS 87-01
5.3	1.5	VII	VI	34.00	116.61	CDMG12204		SMA-1	33.80	116.81	yes	CDMG OSMS 87-01
		VII	VII	34.00	116.61	USGS 5070			33.92	116.54	TH	USGS Quick Look
		VII	VII	34.00	116.61	USGS 5070			33.92	116.54	TH	USGS Quick Look
15.5	2.8	VII	VI	34.00	116.61	CDMG12015			33.83	116.50	yes	CDMG OSMS 87-01
10.0	6.5	VII	VI	34.00	116.61	CDMG12149		SMA-1	33.96	116.51	yes	CDMG OSMS 87-01
11.8	7.3	VII	VI	34.00	116.61	CDMG12149		SMA-1	33.96	116.51	yes	CDMG OSMS 87-01
		VII	VII	34.00	116.61	USGS 5072			33.99	116.66	TH	USGS Quick Look
		VII	VII	34.00	116.61	USGS 5072			33.99	116.66	TH	USGS Quick Look
		VII	VI	34.00	116.61	USGS 5071			34.00	116.60	TH	USGS Quick Look
		VII	VI	34.00	116.61	USGS 5071			34.00	116.60	TH	USGS Quick Look
15.0	14.5	VII	VII	34.00	116.61	SCE 15		SMA-2	33.93	116.58	yes	So Cal Edison Co
14.5	6.4	VII	VII	34.00	116.61	SCE 15		SMA-2	33.93	116.58	yes	So Cal Edison Co
	5.0	VIII	VIII	34.06	118.08	USGS 289			34.03	118.05	TH	USG OF 87-616
	5.0	VIII	VIII	34.06	118.08	USGS 289			34.03	118.05	TH	USG OF 87-616
5.5	2.6	VIII	VII	34.06	118.08	CDMG24401			34.12	118.13	yes	CDMG Tape Printout
	3.0	VIII	VIII	34.06	118.08	USGS 804			33.98	118.04	TH	USGS OF 87-616
	2.4	VIII	VIII	34.06	118.08	USGS 804			33.98	118.04	TH	USGS OF 87-616
	3.1	VIII	VIII	34.06	118.08	USGS 709	MWD		34.05	118.11	TH	USGS OF 87-616
	2.8	VIII	VIII	34.06	118.08	USGS 709	MWD		34.05	118.11	TH	USGS OF 87-616
6.4	3.7	VIII	VIII	34.06	118.08	CDMG24461			34.07	118.15	yes	CDMG Tape Printout
6.8	3.3	VIII	VIII	34.06	118.08	CDMG24431			34.07	118.15	yes	CDMG Tape Printout
	6.0	VIII	VII	34.06	118.08	CDMG24468			34.07	118.69	TH	CDMG OSMS 87-05
	2.2	VIII	VII	34.06	118.08	CDMG24468			34.07	118.69	TH	CDMG OSMS 87-05
		VIII	VII	34.06	118.08	USGS 482			34.09	118.15	TH	USGS OF 87-616
		VIII	VII	34.06	118.08	USGS 482			34.09	118.15	TH	USGS OF 87-616

(3)

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID.	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km
CAL	258	871001	1442	Whittier Narrows	Norwalk 12400 Impl Hwy	Soft	5.9	9
CAL	259	871001	1442	Whittier Narrows	LA Obregon Park	Soft	5.9	9
CAL	260	871001	1442	Whittier Narrows	LA Obregon Park	Soft	5.9	9
CAL	261	871001	1442	Whittier Narrows	Altadena Eaton Cyn Pk	Soft	5.9	9
CAL	262	871001	1442	Whittier Narrows	LA 4407 Jasper St		5.9	9
CAL	263	871001	1442	Whittier Narrows	LA 4407 Jasper St		5.9	9
CAL	264	871001	1442	Whittier Narrows	LA Bulk Mail Center		5.9	9
CAL	265	871001	1442	Whittier Narrows	LA Bulk Mail Center		5.9	9
CAL	266	871001	1442	Whittier Narrows	Brea Dam, downstream		5.9	9
CAL	267	871001	1442	Whittier Narrows	Brea Dam, downstream		5.9	9
CAL	268	871001	1442	Whittier Narrows	Vernon 4814 Loma Vista	Soft	5.9	9
CAL	269	871001	1442	Whittier Narrows	Vernon 4814 Loma Vista	Soft	5.9	9
CAL	270	871001	1442	Whittier Narrows	Tarzana Cedar Hl Nursery	Hard	5.9	9
CAL	271	871001	1442	Whittier Narrows	Tarzana Cedar Hl Nursery	Hard	5.9	9
CAL	272	871001	1442	Whittier Narrows	LA 116th St School	Soft	5.9	9
CAL	273	871001	1442	Whittier Narrows	LA 116th St School	Soft	5.9	9
CAL	274	871001	1442	Whittier Narrows	Inglwd Union Oil yard	Soft	5.9	9
CAL	275	871001	1442	Whittier Narrows	Inglwd Union Oil yard	Soft	5.9	9
CAL	276	871001	1442	Whittier Narrows	LongBch Rcho LosCemtos	Soft	5.9	9
CAL	277	871001	1442	Whittier Narrows	LA Hwd Storage BB, FF	Soft	5.9	9
CAL	278	871001	1442	Whittier Narrows	Downey Co Maint. Bldg	Soft	5.9	9
CAL	279	871001	1442	Whittier Narrows	Mt Wilson CIT Seis Sta	Hard	5.9	9
CAL	280	871004	1059	Whittier AftShk	Whittier 7215 Bnght	Soft	5.3	9
CAL	281	871004	1059	Whittier AftShk	Whittier 7215 Bright	Soft	5.3	9
CAL	282	871004	1059	Whittier AftShk	LA Bulk Mail Center		5.3	9
CAL	283	871004	1059	Whittier AftShk	LA Bulk Mail Center		5.3	9

) gal or greater or of exceptional interest)

David J. Leeds
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LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LON
< 12400 Impl Hwy	Soft	5.9	9	15	17		290					VIII	VII	34.06	118.0
;gon Park	Soft	5.9	9	10	13	270	399	12.9	2.35	9.6	5.7	VIII	VIII	34.06	118.0
;gon Park	Soft	5.9	9	10	13	360	420	21.8	2.82	11.2	6.3	VIII	VIII	34.06	118.0
:a Eaton Cyn Pk	Soft	5.9	9	13	16	360	299	10.2	1.21	4.7	2.6	VIII	VIII	34.06	118.0
7 Jasper St		5.9	9	11	14		330					VIII		34.06	118.0
7 Jasper St		5.9	9	11	14		230					VIII		34.06	118.0
Mail Center		5.9	9	11	14		460					VIII		34.06	118.0
Mail Center		5.9	9	11	14		340					VIII		34.06	118.0
ım, downstream		5.9	9	23	25		320					VIII		34.06	118.0
ım, downstream		5.9	9	23	25		180					VIII		34.06	118.0
4814 Loma Vista	Soft	5.9	9	13	16		290					VIII	VII	34.06	118.0
4814 Loma Vista	Soft	5.9	9	13	16		220					VIII	VII	34.06	118.0
Cedar HI Nursery	Hard	5.9	9	44	45	90	527	24.2	1.35	12.0	5.6	VIII	VIII	34.06	118.0
Cedar HI Nursery	Hard	5.9	9	44	45	360	398	19.2	1.35	9.5	5.6	VIII	VIII	34.06	118.0
:h St School	Soft	5.9	9	22	24	360	384	18.6	2.07	3.5	2.9	VIII	VIII	34.06	118.0
th St School	Soft	5.9	9	22	24	270	253	17.5	1.69	6.6	2.23	VIII	VIII	34.06	118.0
Jnion Oil yard	Soft	5.9	9	25	27	90	219	16.4	2.00	8.7	1.8	VIII	VII	34.06	118.0
Jnion Oil yard	Soft	5.9	9	25	27	360	246	8.7	0.70	5.6	2.6	VIII	VII	34.06	118.0
ı Rcho LosCerritos	Soft	5.9	9	27	28	90	233	18.4	2.10	7.6	1.8	VIII	VII	34.06	118.0
Storage BB, FF	Soft	5.9	9	25	27	360	201	9.1	1 30	5.1	2.4	VIII	VII	34.06	118.0
/ Co Maint. Bldg	Soft	5.9	9	17	19	180	193	28.9	3 69	7.6	1.5	VIII	VII	34.06	118.0
on CIT Seis Sta	Hard	5.9	9	19	21	90	171	4 1	0.32	6.1	3 0	VIII	VI	34.06	118.0
7215 Bnght	Soft	5.3	9	12	15		330						VIII	34.07	118.1
7215 Bright	Soft	5.3	9	12	15		300						VIII	34.07	118.1
Mail Center		5.3	9	11	14		250							34.07	118.1
Mail Center		5.3	9	11	14		240							34.07	118.1

(2)

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
		VIII	VII	34.06	118.08	USGS 8634			33.92	118.07	TH	USGS OF 87-616
9.6	5.7	VIII	VIII	34.06	118.08	CDMG24400			34.04	118.18	yes	CDMG Tape Printout
11.2	6.3	VIII	VIII	34.06	118.08	CDMG24400			34.04	118.18	yes	CDMG Tape Printout
4.7	2.6	VIII	VIII	34.06	118.08	CDMG24402			34.18	118.10	yes	CDMG Tape Printout
		VIII		34.06	118.08	USGS 5244			34.08	118.19	TH	USGS OF 87-616
		VIII		34.06	118.08	USGS 5244			34.08	118.19	TH	USGS OF 87-616
		VIII		34.06	118.08	USGS 5129			33.99	118.16	TH	USGS OF 87-616
		VIII		34.06	118.08	USGS 5129			33.99	118.16	TH	USGS OF 87-616
		VIII		34.06	118.08	ACOE 951			33.89	117.93	TH	USGS OF 87-616
		VIII		34.06	118.08	ACOE 951			33.89	117.93	TH	USGS OF 87-616
		VIII	VII	34.06	118.08	USGS 288			34.00	118.20	TH	USGS OF 87-616
		VIII	VII	34.06	118.08	USGS 288			34.00	118.20	TH	USGS OF 87-616
12.0	5.6	VIII	VIII	34.06	118.08	CDMG24436			34.16	118.53	yes	CDMG Tape Printout
9.5	5.6	VIII	VIII	34 06	118 08	CDMG24436			34.16	118.53	yes	CDMG Tape Printout
3.5	2.9	VIII	VIII	34.06	118.08	CDMG14403			33.93	118.26	yes	CDMG Tape Printout
6.6	2.23	VIII	VIII	34.06	118 08	CDMG14403			33.93	118.26	yes	CDMG Tape Printout
8 7	1.8	VIII	VII	34.06	118.08	CDMG14196			33.91	118.28	yes	CDMG Tape Printout
5.6	2.6	VIII	VII	34.06	118.08	CDMG14196			33.91	118.28	yes	CDMG Tape Printout
7.6	1.8	VIII	VII	34 06	118 08	CDMG14241			33.78	118.13	yes	CDMG Tape Printout
5.1	2.4	VIII	VII	34.06	118.08	CDMG24303			34.09	118.34	yes	CDMG Tape Printout
7.6	1 5	VIII	VII	34.06	118.08	CDMG14368			33 92	118.17	yes	CDMG Tape Printout
6 1	3 0	VIII	VI	34.06	118.08	CDMC.24399			34.22	118 06	yes	CDMG Tape Printout
			VIII	34.07	118.10	USGS 804			33.98	118.04	TH	USGS OF 88-38
			VIII	34.07	118.10	USGS 804			33.98	118 04	TH	USGS OF 88-38
				34.07	118.10	USGS 5129			33 99	118.16	TH	USGS OF 88-38
				34 07	118.10	USGS 5129			33.99	118 16	TH	USGS OF 88-38

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	E k
CAL	284	871004	1059	Whittier AftShk	Vernon 4814 Loma Vista	Soft	5.3	9	
CAL	285	871004	1059	Whittier AftShk	Vernon 4814 Loma Vista	Soft	5.3	9	
CAL	286	871004	1059	Whittier AftShk	Garvey Reservoir, abut.	Hard	5.3	9	
CAL	287	871004	1059	Whittier AftShk	Garvey Reservoir, abut.	Hard	5.3	9	
CAL	288	871124	154	Superstition Hls	Calipatria Fire Station	Soft	6.2	12	
CAL	289	871124	154	Superstition Hls	Calipatria Fire Station	Soft	6.2	12	
CAL	290	871124	1315	Superstition Hls	Superstition Mtn #8	Hard	6.6	12	
CAL	291	871124	1315	Superstition Hls	Superstition Mtn #8	Hard	6.6	12	
CAL	292	871124	1315	Superstition Hls	Parachute Test Site	Soft	6.6	12	
CAL	293	871124	1315	Superstition Hls	Parachute Test Site	Soft	6.6	12	
CAL	294	871124	1315	Superstition Hls	POE Temp		6.6	12	
CAL	295	871124	1315	Superstition Hls	POE Temp		6.6	12	
CAL	296	871124	1315	Superstition Hls	ElCentro Array 8	Soft	6.6	12	
CAL	297	871124	1315	Superstition Hls	ElCentro Array 8	Soft	6.6	12	
CAL	298	871124	1315	Superstition Hls	Calipatria Fire Station	Soft	6 6	12	
CAL	299	871124	1315	Superstition Hls	Calipatria Fire Station	Soft	6.6	12	
CAL	300	871124	1315	Superstition Hls	ElCentro Array 11	Soft	6.6	12	
CAL	301	871124	1315	Superstition Hls	ElCentro Array 11	Soft	6.6	12	
CAL	302	871124	1315	Superstition Hls	ElCentro Array 9	Soft	6.6	12	
CAL	303	871124	1315	Superstition Hls	ElCentro Array 9	Soft	6 6	12	
CAL	304	871124	1315	Superstition Hls	ElCentro Diff Array	Soft	6.6	12	
CAL	305	871124	1315	Superstition Hls	ElCentro Diff Array	Soft	6.6	12	
CAL	306	871124	1315	Superstition Hls	Bonds Cnr, Hwy 98/115	Soft	6.6	12	
CAL	307	871124	1315	Superstition Hls	Bonds Cnr, Hwy 98/115	Soft	6 6	12	
CAL	308	871124	1315	Superstition Hls	Bonds Cnr, Hwy 98/115	Soft	6 6	12	
CAL	309	871124	1315	Superstition Hls	Bonds Cnr, Hwy 98/115	Soft	6 6	12	

00 gal or greater or of exceptional interest)

David J. Leeds
DJLA 90-21-14

LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR. deg	HOR gal	VEL cm/s	DISP cm	DURATION		INTENSITY		EPICENTE	
										g5%	g10%	EPI	STA	LAT	L
on 4814 Loma Vista	Soft	5.3	9	12	15		270						VII	34.07	11
on 4814 Loma Vista	Soft	5.3	9	12	15		150						VII	34.07	11
y Reservoir, abut.	Hard	5.3	9	2	9		210						VI	34.07	11
y Reservoir, abut.	Hard	5.3	9	2	9		190						VI	34.07	11
tria Fire Station	Soft	6.2	12	26	29		220				0.7		VII	33.01	11
tna Fire Station	Soft	6.2	12	26	29		150				0.7		VII	33.01	11
stition Mtn #8	Hard	6.6	12	7	14		910				16.5		IX	33.01	11
stition Mtn #8	Hard	6.6	12	7	14		730				16.5		IX	33.01	11
hute Test Site	Soft	6.6	12	17	21		530				13.7		IX	33.01	11
hute Test Site	Soft	6.6	12	17	21		490				13.7		IX	33.01	11
Temp		6.6	12	14	18		540				18.1			33 01	11
Temp		6.6	12	14	18		330				18.1			33.01	11
tro Array 8	Soft	6.6	12	38	40		350				10.1		VIII	33.01	11
tro Array 8	Soft	6.6	12	38	40		330				10.1		VIII	33.01	11
tria Fire Station	Soft	6.6	12	34	36		320				10.8		VIII	33.01	11
tna Fire Station	Soft	6.6	12	34	36		240				10.8		VIII	33.01	11
tro Array 11	Soft	6.6	12	38	40		320				15 7		VIII	33.01	11
tro Array 11	Soft	6.6	12	38	40		210				15 7		VIII	33.01	11
tro Array 9	Soft	6.6	12	38	40		300				3 6		VIII	33.01	11
tro Array 9	Soft	6.6	12	38	40		200				3.6		VIII	33.01	11
tro Diff Array	Soft	6.6	12	39	41		290				13 4		VIII	33.01	11
tro Diff Array	Soft	6.6	12	39	41		230				13 4		VIII	33.01	11
Cmr, Hwy 98/115	Soft	6.6	12	60	61		290				9.8		VIII	33.01	11
Cmr, Hwy 98/115	Soft	6 6	12	60	61		270				9 8		VIII	33.01	11
Cmr, Hwy 98/115	Soft	6.6	12	60	61		280						VIII	33 01	11
Cmr, Hwy 98/115	Soft	6 6	12	60	61		280						VIII	33.01	11

s
14

Sep 11, 1990

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
			VII	34.07	118.10	USGS 288			34.00	118.10	TH	USGS OF 88-38
			VII	34.07	118.10	USGS 288			34.00	118.10	TH	USGS OF 88-38
			VI	34.07	118.10	USGS 709			34.05	118.11	TH	USGS OF 88-38
			VI	34.07	118.10	USGS 709			34.05	118.11	TH	USGS OF 88-38
	0.7		VII	33.01	115.86	USGS 5061			33.13	115.52	TH	
	0.7		VII	33.01	115.86	USGS 5061			33.13	115.52	TH	—
	16.5		IX	33.01	115.86	USGS 286		RFT250	32.96	115.82	TH	
	16.5		IX	33.01	115.86	USGS 286		RFT250	32.96	115.82	TH	
	13.7		IX	33.01	115.86				32.93	115.70	TH	
	13.7		IX	33.01	115.86				32.93	115.70	TH	
	18.1			33.01	115.86				33.10	115.75	TH	
	18.1			33.01	115.86				33.10	115.75	TH	
	10.1		VIII	33.01	115.86	USGS 958			32.81	115.53	no	
	10.1		VIII	33.01	115.86	USGS 958			32.81	115.53	no	
	10.8		VIII	33.01	115.86	USGS 5061			33.13	115.52	no	
	10.8		VIII	33.01	115.86	USGS 5061			33.13	115.52	no	
	15 7		VIII	33.01	115.86	USGS 5058			32.75	115.59	TH	
	15 7		VIII	33.01	115.86	USGS 5058			32.75	115.59	TH	
	3 6		VIII	33.01	115.86	USGS 117			32.79	115.55	TH	
	3 6		VIII	33.01	115.86	USGS 117			32.79	115.55	TH	
	13 4		VIII	33.01	115.86	USGS 5165			32.80	115 54	TH	
	13 4		VIII	33.01	115.86	USGS 5165			32.80	115 54	TH	
	9 8		VIII	33.01	115.86	USGS 5054		RFT	32 69	115.34	no	
	9 8		VIII	33.01	115.86	USGS 5054		RFT	32.69	115.34	no	
			VIII	33.01	115.86	USGS 5054		SMA	32 69	115 34	no	
			VIII	33.01	115 86	USGS 5054		SMA	32.69	115 34	no	

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km
CAL	310	871124	1315	Superstition Hls	ElCentro Mdws Un'n Sch	Soft	6.6	12
CAL	311	871124	1315	Superstition Hls	ElCentro Mdws Un'n Sch	Soft	6.6	12
CAL	312	871124	1315	Superstition Hls	ElCentro Array 10	Soft	6.6	12
CAL	313	871124	1315	Superstition Hls	ElCentro Array 10	Soft	6.6	12
CAL	314	871124	1315	Superstition Hls	ElCentro Array 7	Soft	6.6	12
CAL	315	871124	1315	Superstition Hls	ElCentro Array 7	Soft	6.6	12
CAL	316	871124	1315	Superstition Hls	Calexico Fire Station	Soft	6.6	12
CAL	317	871124	1315	Superstition Hls	Calexico Fire Station	Soft	6.6	12
CAL	318	871124	1315	Superstition Hls	Impl Wildlife Liq Array	Soft	6.6	12
CAL	319	871124	1315	Superstition Hls	Impl Wildlife Liq Array	Soft	6.6	12
CAL	320	871124	1315	Superstition Hls	ElCentro Array 5	Soft	6.6	12
CAL	321	871124	1315	Superstition Hls	ElCentro Array 5	Soft	6.6	12
CAL	322	891018	4	Loma Prieta	Anderson Dam, Downstream	Soft	7.1	18
CAL	323	891018	4	Loma Prieta	Anderson Dam, Downstream	Soft	7.1	18
CAL	324	891018	4	Loma Prieta	Anderson Dam, Left Abutmt	Rock	7.1	18
CAL	325	891018	4	Loma Prieta	Anderson Dam, Left Abutmt	Rock	7.1	18
CAL	326	891018	4	Loma Prieta	Sunnyvale, Colton Avenue	Soft	7.1	18
CAL	327	891018	4	Loma Prieta	Sunnyvale, Colton Avenue	Soft	7.1	18
CAL	328	891018	4	Loma Prieta	Hollister Airport	Soft	7.1	18
CAL	329	891018	4	Loma Prieta	Hollister Airport	Soft	7.1	18
CAL	330	891018	4	Loma Prieta	Palo Alto VA Hosp , Bsmt	Hard	7.1	18
CAL	331	891018	4	Loma Prieta	Palo Alto VA Hosp., Bsmt	Hard	7.1	18
CAL	332	891018	4	Loma Prieta	Hollister City Hall Annex	Soft	7.1	18
CAL	333	891018	4	Loma Prieta	Hollister City Hall Annex	Soft	7.1	18
CAL	334	891018	4	Loma Prieta	Stanford SLAC Test Lab	Hard	7.1	18
CAL	335	891018	4	Loma Prieta	Stanford SLAC Test Lab	Hard	7 1	18

0 gal or greater or of exceptional interest)

David J. Leeds
D.U.A 90-21-14

LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LON
ro Mdws Un'n Sch	Soft	6.6	12	43	45		270						VIII	33.01	116.8
ro Mdws Un'n Sch	Soft	6.6	12	43	45		260						VIII	33.01	116.8
ro Array 10	Soft	6.6	12	37	39		270						VIII	33.01	116.8
ro Array 10	Soft	6.6	12	37	39		220						VIII	33.01	116.8
ro Array 7	Soft	6.6	12	39	41		260				3.6		VIII	33.01	116.8
o Array 7	Soft	6.6	12	39	41		200				3.6		VIII	33.01	116.8
o Fire Station	Soft	6.6	12	51	52		210				11.7		VII	33.01	116.8
o Fire Station	Soft	6.6	12	51	52		210				11.7		VII	33.01	116.8
ildlife Liq Array	Soft	6.6	12	32	34		210				13.2		VII	33.01	116.8
ildlife Liq Array	Soft	6.6	12	32	34		190				13.2		VII	33.01	116.8
o Array 5	Soft	6.6	12	41	43		200				3.9		VII	33.01	116.8
o Array 5	Soft	6.6	12	41	43		190				3.9		VII	33.01	116.8
on Dam, Downstream	Soft	7.1	18	19	26	340	239	19.2	2.89	14.0	10.7	VIII	VII	37.04	121.8
on Dam, Downstream	Soft	7.1	18	19	26	250	239	18.0	3.76	11.5	7.7	VIII	VII	37.04	121.8
on Dam, Left Abutmt	Rock	7.1	18	19	26	340	79	9.1	2.45	4.9	0.0	VIII	VI	37.04	121.8
o.i Dam, Left Abutmt	Rock	7.1	18	19	26	250	60	12.1	3 77	3.8	0.0	VIII	VI	37.04	121.8
ale, Colton Avenue	Soft	7.1	18	18	25	360	215	33.4	13.84	30.0	3.2	VIII	VII	37.04	121.8
ale, Colton Avenue	Soft	7.1	18	18	25	270	210	34.1	12.64	16.4	11.3	VIII	VII	37.04	121.8
r Airport	Soft	7.1	18	18	25	255	281	36.6	8.42	12.7	8.0	VIII	VII	37.04	121.8
r Airport	Soft	7.1	18	18	25	165	277	44.4	10.23	16.7	4.6	VIII	VII	37.04	121.8
:o VA Hosp , Bsmt	Hard	7.1	18	16	24	302	342	23.0	8.64	15.9	4.4	VIII	VII	37.04	121.8
:o VA Hosp., Bsmt	Hard	7 1	18	16	24	212	378	40.5	10.04	12.0	5 3	VIII	VII	37.04	121.8
r City Hall Annex	Soft	7 1	18	19	26	180	217	44 0	12.16	13 0	7.4	VIII	VII	37.04	121 8
r City Hall Annex	Soft	7 1	18	19	26	90	252	38.7	8 53	18.2	6.4	VIII	VII	37.04	121.8
d SLAC Test Lab	Hard	7 1	18	9	20	360	282	28.4	7 06	19.3	5.5	VIII	VII	37 04	121.8
d SLAC Test Lab	Hard	7 1	18	9	20	270	198	36.7	8.51	13.4	2 6	VIII	VII	37.04	121.8

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
			VIII	33.01	116.86	USGS 464			32.80	115.47	no	
			VIII	33.01	116.86	USGS 464			32.80	115.47	no	
			VIII	33.01	116.86	USGS 412			32.78	115.57	TH	
			VIII	33.01	116.86	USGS 412			32.78	115.57	TH	
	3.6		VIII	33.01	116.86	USGS 5028			32.83	115.50	no	
	3.6		VIII	33.01	116.86	USGS 5028			32.83	115.50	no	
	11.7		VII	33.01	116.86	USGS 5053			32.67	115.49	no	
	11.7		VII	33.01	116.86	USGS 5053			32.67	115.49	no	
	13.2		VII	33.01	116.86	USGS 5210			33.10	115.53	TH	
	13.2		VII	33.01	116.86	USGS 5210			33.10	115.53	TH	
	3.9		VII	33.01	116.86	USGS 952			32.86	115.47	no	
	3.9		VII	33.01	116.86	USGS 952			32.86	115.47	no	
14.0	10.7	VIII	VII	37.04	121.88	USGS 1652			37.166	121 63	yes	USGS OF 90-247
11.5	7.7	VIII	VII	37.04	121.88	USGS 1652			37.166	121 63	yes	USGS OF 90-247
4 9	0.0	VIII	VI	37.04	121.88	USGS 1652			37.160	121 63	yes	USGS OF 90-247
3.8	0.0	VIII	VI	37.04	121.88	USGS 1652			37 166	121.63	yes	USGS OF 90-247
30.0	3 2	VIII	VII	37.04	121.88	USGS 1695			37 402	122 02	yes	USGS OF 90-247
16.4	11 3	VIII	VII	37.04	121.88	USGS 1695			37 402	122 02	yes	USGS OF 90-247
12.7	8 0	VIII	VII	37.04	121.88	USGS 1656			36 888	121 413	yes	USGS OF 90-247
6.7	4.6	VIII	VII	37.04	121.88	USGS 1656			36 888	121 413	yes	USGS OF 90-247
5 9	4 4	VIII	VII	37 04	121.88	USGS 1227			37 40	122 14	yes	USGS OF 90-247
12 0	5 3	VIII	VII	37.04	121.88	USGS 1227			37 40	122 14	yes	USGS OF 90-247
3.0	7 4	VIII	VII	37.04	121.88	USGS 1575			36 851	121 40	yes	USGS OF 90-247
8.2	6.4	VIII	VII	37.04	121.88	USGS 1575			36 851	121 40	yes	USGS OF 90-247
9 3	5 5	VIII	VII	37.04	121.88	USGS 1601			37 419	122 21	yes	USGS OF 90-247
3 .	. 6	VIII	VII	37.04	121.88	USGS 1601			37 419	122 21	yes	USGS OF 90-247

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km
CAL	336	891018	4	Loma Prieta	Stanford Parking Garage	Soft	7.1	18	9	20
CAL	337	891018	4	Loma Prieta	Stanford Parking Garage	Soft	7.1	18	9	20
CAL	338	891018	4	Loma Prieta	Menlo Pk VA Hosp Bldg 137	Soft	7.1	18	21	28
CAL	339	891018	4	Loma Prieta	Menlo Pk VA Hosp Bldg 137	Soft	7.1	18	21	28
CAL	340	891018	4	Loma Prieta	Calaveras Array-Fremont	Soft	7.1	18	34	38
CAL	341	891018	4	Loma Prieta	Calaveras Array-Fremont	Soft	7.1	18	34	38
CAL	342	891018	4	Loma Prieta	Apeel Array 2, Redwood Cy	Soft	7.1	18	31	36
CAL	343	891018	4	Loma Prieta	Apeel Array 2, Redwood Cy	Soft	7.1	18	31	36
CAL	344	891018	4	Loma Prieta	SFO Transamerica Bldg	Hard	7.1	18	61	69
CAL	345	891018	4	Loma Prieta	SFO Transamerica Bldg	Hard	7.1	18	61	69
CAL	346	891018	4	Loma Prieta	Emeryville-6363 Christie S	Soft	7.1	18	62	66
CAL	347	891018	4	Loma Prieta	Emeryville-6363 Christie S	Soft	7.1	18	62	66
CAL	348	891018	4	Loma Prieta	Golden Gate Bridge, Abut	Rock	7.1	18	67	69
CAL	349	891018	4	Loma Prieta	Golden Gate Bridge, Abut	Rock	7.1	18	67	69
CAL	350	891018	4	Loma Prieta	Corralitos-Eureka Cyn Rd	Soft	7.1	18	2	18
CAL	351	891018	4	Loma Prieta	Corralitos-Eureka Cyn Rd	Soft	7.1	18	2	18
CAL	352	891018	4	Loma Prieta	Capitola Fire Station	Soft	7.1	18	15	23
CAL	353	891018	4	Loma Prieta	Capitola Fire Station	Soft	7.1	18	15	23
CAL	354	891018	4	Loma Prieta	UC Santa Cruz Lick Lab	Rock	7.1	18	15	23
CAL	355	891018	4	Loma Prieta	UC Santa Cruz Lick Lab	Rock	7.1	18	15	23
CAL	356	891018	4	Loma Prieta	Hollister-So.St/Pine Dr	Soft	7.1	18	8	20
CAL	357	891018	4	Loma Prieta	Hollister-So.St/Pine Dr	Soft	7.1	18	8	20
CAL	358	891018	4	Loma Prieta	Treasure Island	Soft	7.1	18	65	67
CAL	359	891018	4	Loma Prieta	Treasure Island	Soft	7 1	18	65	67
CAL	360	891018	4	Loma Prieta	Yerba Buena Island	Rock	7.1	18	63	65
CAL	361	891018	4	Loma Prieta	SFO Diamond Heights	Rock	7 1	18	58	61

gal or greater or of exceptional interest)

David J. Leeds
DJLA 90-21-14

LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
Parking Garage	Soft	7.1	18	9	20	360	255	33.2	9.51	10.5	7.9	VIII	VII	37.04	121.88
Parking Garage	Soft	7.1	18	9	20	90	216	21.3	5.60	9.6	2.1	VIII	VII	37.04	121.88
. VA Hosp Bldg 137	Soft	7.1	18	21	28	20	288	24.4	6.53	7.0	1.3	VIII	VII	37.04	121.88
: VA Hosp Bldg 137	Soft	7.1	18	21	28	110	117	15.8	5.31	11.9	2.0	VIII	VII	37.04	121.88
s Array-Fremont	Soft	7.1	18	34	38	180	143	10.3	2.27	11.1	4.9	VIII	VI	37.04	121.88
s Array-Fremont	Soft	7.1	18	34	38	90	191	10.8	2.49	10.5	3.9	VIII	VI	37.04	121.88
ray 2, Redwood Cy	Soft	7.1	18	31	36	43	272	53.1	10.36	11.2	4.2	VIII	VII	37.04	121.88
ray 2, Redwood Cy	Soft	7.1	18	31	36	133	223	35.9	5.68	13.4	4.8	VIII	VII	37.04	121.88
isamerica Bldg	Hard	7.1	18	61	69	171	104	8.8	1.91	10.5	0.3	VIII	VI	37.04	121.88
isamerica Bldg	Hard	7.1	18	61	69	261	120	19.3	5.22	4.0	0.9	VIII	VI	37.04	121.88
e-6363 Christie S	Soft	7.1	18	62	66	350	210	21.5	3.75	16.0	1.0	VIII	VII	37.04	121.88
e-6363 Christie S	Soft	7.1	18	62	66	260	255	41.1	8.21	12.1	5.3	VIII	VII	37.04	121.88
ate Bridge, Abut	Rock	7.1	18	67	69	360	124	18.0	3 86	5.8	3 0	VIII	VI	37.04	121.88
ate Bridge, Abut	Rock	7.1	18	67	69	270	239	35.5	7 42	6.0	2.8	VIII	VI	37.04	121.88
-Eureka Cyn Rd	Soft	7.1	18	2	18	90	469	47.5	11 50	15.3	8 6	VIII	VIII	37 04	121.88
-Eureka Cyn Rd	Soft	7 1	18	2	18	0	618	55.2	9.54	15.5	5.9	VIII	VIII	37.04	121.88
Fire Station	Soft	7 1	18	15	23	90	391	30 7	7 29	20.1	14.3	VIII	VIII	37 04	121 88
Fire Station	Soft	7.1	18	15	23	0	483	36.1	11.00	25.0	16.6	VIII	VIII	37.04	121 88
Cruz Lick Lab	Rock	7.1	18	15	23	0	433	21.2	6.61	17.4	12 3	VIII	VIII	37 04	121.88
Cruz Lick Lab	Rock	7.1	18	15	23	90	402	21.2	6.81	16.8	10.7	VIII	VIII	37.04	121 88
So.St/Pine Dr	Soft	7.1	18	8	20	0	362	62 8	30 20	23 8	9 0	VIII	VII	37 04	121 88
So St/Pine Dr	Soft	7 1	18	8	20	90	175	30 9	20.40	25 7	12 4	VIII	VII	37 04	121 88
Island	Soft	7.1	18	65	67	0	98	15.6	4 48	4 0	0 0	VIII	VII	37 04	121 88
Island	Soft	7 1	18	65	67	90	156	33.4	12.20	2.8	2 5	VIII	VII	37.04	121.88
ona Island	Rock	7 1	18	63	65	90	66	14 7	4 12	0 3	0 0	VIII	V	37 04	121.88
ond Heights	Rock	7 1	18	58	61	0	96	10.5	2 83	2 9	0.0	VIII	VI	37.04	121.88

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
10.5	7.9	VIII	VII	37.04	121.88	USGS 1601			37.	122.	yes	USGS OF 90-247
9.6	2.1	VIII	VII	37.04	121.88	USGS 1601			37.	122.	yes	USGS OF 90-247
7.0	1.3	VIII	VII	37.04	121.88	USGS 1230			37.468	122.16	yes	USGS OF 90-247
11.9	2.0	VIII	VII	37.04	121.88	USGS 1230			37.468	122.16	yes	USGS OF 90-247
11.1	4.9	VIII	VI	37.04	121.88	USGS 1686			37.535	121.93	yes	USGS OF 90-247
10.5	3.9	VIII	VI	37.04	121.88	USGS 1686			37.535	121.93	yes	USGS OF 90-247
11.2	4.2	VIII	VII	37.04	121.88	USGS 1002			37.52	122.25	yes	USGS OF 90-247
13.4	4.8	VIII	VII	37.04	121.88	USGS 1002			37.52	122.25	yes	USGS OF 90-247
10.5	0.3	VIII	VI	37.04	121.88	USGS 1239			37.80	122.40	yes	USGS OF 90-247
4.0	0.9	VIII	VI	37.04	121.88	USGS 1239			37.80	122.40	yes	USGS OF 90-247
16.0	1.0	VIII	VII	37.04	121.88	USGS 1662			37.844	122.30	yes	USGS OF 90-247
12.1	5.3	VIII	VII	37.04	121.88	USGS 1662			37.844	122.30	yes	USGS OF 90-247
5.8	3.0	VIII	VI	37.04	121.88	USGS 1678			37.806	122.47	yes	USGS OF 90-247
6.0	2 8	VIII	VI	37.04	121.88	USGS 1678			37 806	122.47	yes	USGS OF 90-247
15.3	8.6	VIII	VIII	37.04	121.88	CDMG 57007			37 046	121 803	yes	CDMG Plots12/13/89
15.5	5.9	VIII	VIII	37.04	121.88	CDMG 57007			37 046	121 803	yes	CDMG Plots12/13/89
20.1	14.3	VIII	VIII	37.04	121.88	CDMG 47125			36.974	121 95	yes	CDMG Plots12/13/89
25.0	16.5	VIII	VIII	37.04	121.88	CDMG 47125			36 974	121 95	yes	CDMG Plots12/13/89
17 4	12 3	VIII	VIII	37.04	121.88	CDMG 58135			37 001	122 060	yes	CDMG Plots12/13/89
16.8	10.7	VIII	VIII	37.04	121.88	CDMG 58135			37 001	122 060	yes	CDMG Plots12/13/89
23.8	9.0	VIII	VII	37.04	121.88	CDMG 47524			38 848	121 40	yes	CDMG Plots12/13/89
25.7	12.4	VIII	VII	37.04	121.88	CDMG 47524			38 848	121 40	yes	CDMG Plots12/13/89
4.0	0 0	VIII	VII	37.04	121.88	CDMG 58117			37 825	122 373	yes	CDMG Plots12/13/89
2.8	2 5	VIII	VII	37.04	121 88	CDMG 58117			37 825	122 373	yes	CDMG Plots12/13/89
0 3	0 0	VIII	V	37.04	121.88	CDMG 58163			37 81	122 36	yes	CDMG Plots12/13/89
2.9	0 0	VIII	VI	37.04	121.88	CDMG 58130			37 74	122 43	yes	CDMG Plots12/13/89

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EL km
CAL	362	891018	4	Loma Prieta	SFO Diamond Heights	Rock	7.1	18	58
CAL	363	891018	4	Loma Prieta	SFO Rincon Hill	Rock	7.1	18	6
CAL	364	891018	4	Loma Prieta	SFO Telegraph Hill	Rock	7.1	18	6
CAL	365	891018	4	Loma Prieta	SFO Presidio	Rock	7.1	18	6
CAL	366	891018	4	Loma Prieta	SFO Presidio	Rock	7.1	18	6
CAL	367	891018	4	Loma Prieta	SFO Cliff House	Rock	7.1	18	6
CAL	368	891018	4	Loma Prieta	SFO Cliff House	Rock	7.1	18	6
CAL	369	891018	4	Loma Prieta	Oakland 2-Story Office	Soft	7.1	18	6
CAL	370	891018	4	Loma Prieta	Oakland 2-Story Office	Soft	7.1	18	6
CAL	371	891018	4	Loma Prieta	Gilroy#1-Gavilan Col. Tk	Rock	7.1	18	
CAL	372	891018	4	Loma Prieta	Gilroy#1-Gavilan Col. Tk	Rock	7.1	18	
CAL	373	891018	4	Loma Prieta	Gilroy#2-Hwy 101/Bolsa Rd	Soft	7.1	18	1
CAL	374	891018	4	Loma Prieta	Gilroy#2-Hwy 101/Bolsa Rd	Soft	7.1	18	1
CAL	375	891018	4	Loma Prieta	Gilroy#3-Sewage Plant	Soft	7.1	18	1
CAL	376	891018	4	Loma Prieta	Gilroy#3-Sewage Plant	Soft	7.1	18	1
CAL	377	891018	4	Loma Prieta	Gilroy#4-SanYsidro School	Soft	7.1	18	1
CAL	378	891018	4	Loma Prieta	Gilroy#4-SanYsidro School	Soft	7.1	18	1
CAL	379	891018	4	Loma Prieta	Gilroy#6-San Ysidro	Rock	7.1	18	2
CAL	380	891018	4	Loma Prieta	Gilroy#6-San Ysidro	Rock	7.1	18	2
CAL	381	891018	4	Loma Prieta	Gilroy#7-Mantelli Ranch	Hard	7.1	18	2
CAL	382	891018	4	Loma Prieta	Gilroy#7-Mantelli Ranch	Hard	7.1	18	2
CAL	383	891018	4	Loma Prieta	Gilroy-GavilanPhys.Sci.Bg	Soft	7.1	18	
CAL	384	891018	4	Loma Prieta	Gilroy-GavilanPhys.Sci.Bg	Soft	7.1	18	
CAL	385	891018	4	Loma Prieta	Saratoga-Aloha Ave	Soft	7.1	18	
CAL	386	891018	4	Loma Prieta	Saratoga-Aloha Ave	Soft	7.1	18	
CAL	387	891018	4	Loma Prieta	Agnews State Hospital	Soft	7.1	18	1

200 gal or greater or of exceptional interest)

David J. Leeds
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LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPI LAT
Diamond Heights	Rock	7.1	18	58	61	90	111	14.3	4.31	6.0	0.1	VIII	VI	37.04
Rincon Hill	Rock	7.1	18	60	63	90	89	11.6	4.88	2.0	0.0	VIII	VII	37.04
Telegraph Hill	Rock	7.1	18	64	66	90	91	9.6	2.76	1.2	0.0	VIII	VI	37.04
Presidio	Rock	7.1	18	64	66	0	98	13.3	4.13	3.3	0.0	VIII	VI	37.04
Presidio	Rock	7.1	18	64	66	90	195	33.5	6.35	6.0	0.2	VIII	VI	37.04
Cliff House	Rock	7.1	18	65	67	0	73	11.2	3.70	3.5	0.0	VIII	VI	37.04
Cliff House	Rock	7.1	18	65	67	90	106	21.0	6.49	3.0	0.1	VIII	VI	37.04
land 2-Story Office	Soft	7.1	18	60	63	290	238	37.9	8.05	13.7	3.2	VIII	VII	37.04
land 2-Story Office	Soft	7.1	18	60	63	200	187	20.0	3.92	11.3	2.6	VIII	VII	37.04
y#1-Gavilan Col. Tk	Rock	7.1	18	8	20	0	427	31.9	6.49	13.2	5.7	VIII	VII	37.04
y#1-Gavilan Col. Tk	Rock	7.1	18	8	20	90	434	33.8	6.32	9.5	5.2	VIII	VII	37.04
y#2-Hwy 101/Bolsa Rd	Soft	7.1	18	11	21	90	316	39.2	10.9	15.3	4.8	VIII	VII	37.04
y#2-Hwy 101/Bolsa Rd	Soft	7.1	18	11	21	0	344	33.3	6.71	12.8	7.0	VIII	VII	37.04
y#3-Sewage Plant	Soft	7.1	18	14	23	0	532	34.5	7.37	17.8	6.0	VIII	VII	37.04
y#3-Sewage Plant	Soft	7.1	18	14	23	90	362	43.8	14.3	16.0	6.4	VIII	VII	37.04
y#4-SanYsidro School	Soft	7.1	18	18	25	0	408	39.1	7.54	14.9	6.7	VIII	VII	37.04
y#4-SanYsidro School	Soft	7.1	18	19	25	90	210	38.2	8.45	22.8	5.7	VIII	VII	37.04
y#6-San Ysidro	Rock	7.1	18	22	28	0	112	13.1	4.95	7.6	2.0	VIII	VI	37.04
y#6-San Ysidro	Rock	7.1	18	22	28	90	167	13.9	3.35	13.0	1 8	VIII	VI	37.04
y#7-Mantelli Ranch	Hard	7.1	18	24	30	0	206	16.6	2 61	13.0	5.6	VIII	VII	37.04
y#7-Mantelli Ranch	Hard	7.1	18	24	30	90	314	16 3	3 37	14 0	4 8	VIII	VII	37.04
y-GavilanPhys.Sci.Bg	Soft	7.1	18	8	20	67	349	28.9	5.81	7.4	3 0	VIII	VII	37.04
y-GavilanPhys.Sci.Bg	Soft	7.1	18	8	20	337	310	23 0	4 78	6.3	4 8	VIII	VII	37.04
toga-Aloha Ave	Soft	7.1	18	4	18	0	495	41.3	15.9	15.4	6.1	VIII	VIII	37.04
toga-Aloha Ave	Soft	7.1	18	4	18	90	316	43 6	28 0	11 6	6 9	VIII	VIII	37 04
owe State Hospital	Soft	7 1	18	18	25	0	163	30 9	18.1	14.4	5 6	VIII	VII	37.04

ds
-14

Sep 11, 1

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
6.0	0.1	VIII	VI	37.04	121.88	CDMG 58130			37.74	122.43	yes	CDMG Plots12/13/8
2.0	0.0	VIII	VII	37.04	121.88	CDMG 58151			37.79	122.39	yes	CDMG Plots12/13/8
1.2	0.0	VIII	VI	37.04	121.88	CDMG 58133			37.80	122.41	yes	CDMG Plots12/13/8
3.3	0.0	VIII	VI	37.04	121.88	CDMG 58222			37.792	122.46	yes	CDMG Plots12/13/8
6.0	0.2	VIII	VI	37.04	121.88	CDMG 58222			37.792	122.46	yes	CDMG Plots12/13/8
3.5	0.0	VIII	VI	37.04	121.88	CDMG 58132			37.78	122.51	yes	CDMG Plots12/13/8
3.0	0.1	VIII	VI	37.04	121.88	CDMG 58132			37.78	122.51	yes	CDMG Plots12/13/8
13.7	3.2	VIII	VII	37.04	121.88	CDMG 58224			37.806	122.27	yes	CDMG Plots12/13/8
11.3	2.6	VIII	VII	37.04	121.88	CDMG 58224			37.806	122.27	yes	CDMG Plots12/13/8
13.2	5.7	VIII	VII	37.04	121.88	CDMG 47379			36.393	121.57	yes	CDMG OSMS 90-01
9.5	5.2	VIII	VII	37.04	121.88	CDMG 47379			36.393	121.57	yes	CDMG OSMS 90-01
15.3	4.8	VIII	VII	37.04	121.88	CDMG 47380			36.982	121.56	yes	CDMG OSMS 90-01
12.8	7.0	VIII	VII	37.04	121.88	CDMG 47380			36.982	121.56	yes	CDMG OSMS 90-01
17.8	6.0	VIII	VII	37.04	121.88	CDMG 47381			36.987	121.54	yes	CDMG OSMS 90-01
16.0	6.4	VIII	VII	37.04	121.88	CDMG 47381			36.987	121.54	yes	CDMG OSMS 90-01
14.9	6.7	VIII	VII	37.04	121.88	CDMG 57382			37.005	121.52	yes	CDMG OSMS 90-01
22.8	5.7	VIII	VII	37.04	121.88	CDMG 57382			37.005	121.52	yes	CDMG OSMS 90-01
7.6	2.0	VIII	VI	37.04	121.88	CDMG 57383			37.026	121.48	yes	CDMG OSMS 90-01
13.0	1.8	VIII	VI	37.04	121.88	CDMG 57383			37.026	121.48	yes	CDMG OSMS 90-01
13.0	5.6	VIII	VII	37.04	121.88	CDMG 57425			37.033	121.43	yes	CDMG OSMS 90-01
14.0	4.8	VIII	VII	37.04	121.88	CDMG 57425			37.033	121.43	yes	CDMG OSMS 90-01
7.4	3.0	VIII	VII	37.04	121.88	CDMG 47006			36.973	121.57	yes	CDMG OSMS 90-01
6 3	4.8	VIII	VII	37.04	121.88	CDMG 47C06			36.973	121.57	yes	CDMG OSMS 90-01
15.4	6 1	VIII	VIII	37.04	121.88	CDMG 58065			37.255	122.03	yes	CDMG OSMS 90-01
11 6	6 9	VIII	VIII	37.04	121.88	CDMG 58065			37 255	122 03	yes	CDMG OSMS 90-01
14 4	5 6	VIII	VII	37 04	121 88	CDMG 57066			37.239	121.95	yes	CDMG OSMS 90-01

A1. UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID.	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km	
CAL	388	891018	4	Loma Prieta	Agnews State Hospital	Soft	7.1	18	18	
CAL	389	891018	4	Loma Prieta	Foster Cy-Redwood Shores	Soft	7.1	18	33	
CAL	390	891018	4	Loma Prieta	Foster Cy-Redwood Shores	Soft	7.1	18	33	
CAL	391	891018	4	Loma Prieta	SFO International Airport	Soft	7.1	18	48	
CAL	392	891018	4	Loma Prieta	SFO International Airport	Soft	7.1	18	48	
CAL	393	891018	4	Loma Prieta	Gilroy 2-st.Hist.Com.Bldg	Soft	7.1	18	10	
CAL	394	891018	4	Loma Prieta	Gilroy 2-st.Hist.Com.Bldg	Soft	7.1	18	10	
CAL	395	891018	4	Loma Prieta	Lexington Dam, Left Abut	Rock	7.1	18	3	
CAL	396	891018	4	Loma Prieta	Lexington Dam, Left Abut	Rock	7.1	18	3	
CAL	397	891018	4	Loma Prieta	Wilsonville 4-st.Com.Bldg	Soft	7.1	18	6	
CAL	398	891018	4	Loma Prieta	Wilsonville 4-st.Com.Bldg	Soft	7.1	18	6	
HAW	1	730426	2026	Hawaii	Kilauea Namakani Paio	Hard	6.1	50		
HAW	2	51129	1447	Hawaii	Hilo UH Old Physics Lab	Hard	7.2	5	42	
HAW	3	751129	1447	Hawaii	Honokaa Count Shop	Hard	7.2	5	95	
HAW	4	790922	759	South Hawaii	Hilo Fish & Wildlife	Hard	5.5	11		
MON	1*	351031	1838	Helena Aftshk	Carroll College	Rock	6.0	6	8	
MON	2*	351031	1838	Helena Aftshk	Carroll College	Rock	7.6	6	8	
NH	1	820119	14	New Hampshire	Franklin Falls Dam, abut	Hard	4.5	6	10	
NH	2	820119	14	New Hampshire	Franklin Falls Dam, abut	Hard	4.5	6	10	
NH	3	820119	14	New Hampshire	Franklin Falls Dam, dnstm	Soft	4.5	6	10	
SC	1	780827	1023	Jenkinsville	Monticello Dam	Hard	2.7	2	1	
SC	2	780827	1023	Jenkinsville	Monticello Dam	Hard	2.7	2	1	
SC	3	780901	1	Jenk AftShk 1	Monticello Dam	Hard	2.5	2	1	
SC	4	780901	1	Jenk AftShk 1	Monticello Dam	Hard	2.5	2	1	
SC	5	780902	2	Jenk AftShk 2	Monticello Dam	Hard	2.6	2	1	
WAS	1	490413	1955	Western Wash.	Olympia Hwy Test Lab	Soft	7.9	70	17	

gal or greater or of exceptional interest)

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LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km	TR deg	HOR gal	VEL cm/s	DISP cm	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LON
State Hospital	Soft	7.1	18	18	25	90	158	18.2	12.8	12.7	4.4	VIII	VII	37.04	121.8
y-Redwood Shores	Soft	7.1	18	33	38	0	253	31.8	6.28	26.4	10.6	VIII	VII	37.04	121.8
y-Redwood Shores	Soft	7.1	18	33	38	90	278	45.4	14.7	19.0	6.4	VIII	VII	37.04	121.8
rnational Airport	Soft	7.1	18	48	51	0	231	26.5	5.05	13.0	7.0	VIII	VII	37.04	121.8
rnational Airport	Soft	7.1	18	48	51	90	326	29.3	5.92	13.0	5.3	VIII	VII	37.04	121.8
st.Hist.Com.Bldg	Soft	7.1	18	10	21	180	239	24.4	3.57	13.7	2.7	VIII	VII	37.04	121.8
st.Hist.Com.Bldg	Soft	7.1	18	10	21	90	280	43.5	9.72	9.3	3.8	VIII	VII	37.04	121.8
n Dam, Left Abut	Rock	7.1	18	3	18	0	434	84.4	14.7	7.2	4.5	VIII	VIII	37.04	121.8
n Dam, Left Abut	Rock	7.1	18	3	18	90	402	95.0	25.8	7.2	4.7	VIII	VIII	37.04	121.8
lle 4-st.Com.Bldg	Soft	7.1	18	6	19	0	267	33.3	8.95	11.6	6.3	VIII	VIII	37.04	121.8
lle 4-st.Com.Bldg	Soft	7.1	18	6	19	90	352	54.9	18.2	11.1	5.2	VIII	VIII	37.04	121.8
Namakani Palo	Hard	6.1	50				156					VIII	VI	19.93	115.1
Old Physics Lab	Hard	7.2	5	42			169			13.7	2.1		VI	19.93	115.0
Count Shop	Hard	7.2	5	95			97						V	19.93	115.0
& Wildlife	Hard	5.5	11				431			8.5	3.4		VIII	19.35	155.0
ollege	Rock	6.0	6	8	10	360	144	7.3	1.4	1.7	1.4	VIII	VIII	46.62	111.9
ollege	Rock	7.6	6	8	10	90	143	13.3	3.7	1.7	1.5	VIII	VIII	46.62	111.9
Falls Dam, abut	Hard	4.5	6	10	11		288	2.7	0.3	0.61	0.25	VI	VI	42.50	71.60
Falls Dam, abut	Hard	4.5	6	10	11		540	5.6	0.4	1.14	0.44	VI	VI	42.50	71.60
Falls Dam, dnstm	Soft	4 5	6	10	11		378	2.9	0.17	1.07	0.29	VI	VI	42.50	71.60
lo Dam	Hard	2.7	2	1	2	180	261	2.3	0.04	0.4	0 1		VI	34.31	81.33
lo Dam	Hard	2.7	2	1	2	90	220	1 7	0.04	0.3	0.2		VI	34.31	81.33
lo Dam	Hard	2.5	2	1	2	180	256	1.9	0.02	0.2	0 1		VI	34.31	81.33
lo Dam	Hard	2 5	2	1	2	90	179	1.5	0.02	0.2	0.1		VI	34.31	81.33
lo Dam	Hard	2.6	2	1	2	90	269	3.3	0.09	0.5	0 3		VI	34.31	81.33
Hwy Test Lab	Soft	7.9	70	17		266	275	17.0	10.4	21.5	18.0	VIII	VIII	47.17	122.6

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
12.7	4.4	VIII	VII	37.04	121.88	CDMG 57066			37.239	121.95	yes	CDMG OSMS 90-01
26.4	10.6	VIII	VII	37.04	121.88	CDMG 58375			37.55	122.23	yes	CDMG OSMS 90-01
19.0	6.4	VIII	VII	37.04	121.88	CDMG 58375			37.55	122.23	yes	CDMG OSMS 90-01
13.0	7.0	VIII	VII	37.04	121.88	CDMG 58223			37.622	122.40	yes	CDMG OSMS 90-01
13.0	5.3	VIII	VII	37.04	121.88	CDMG 58223			37.622	122.40	yes	CDMG OSMS 90-01
13.7	2.7	VIII	VII	37.04	121.88	CDMG 57476			37.009	121.57	yes	CDMG OSMS 90-01
9.3	3.8	VIII	VII	37.04	121.88	CDMG 57476			37.009	121.57	yes	CDMG OSMS 90-01
7.2	4.5	VIII	VIII	37.04	121.88	CDMG 57180			37.202	121.95	yes	CDMG OSMS 90-01
7.2	4.7	VIII	VIII	37.04	121.88	CDMG 57180			37.202	121.95	yes	CDMG OSMS 90-01
11.6	6.3	VIII	VIII	37.04	121.88	CDMG 47459			36.909	121.76	yes	CDMG OSMS 90-01
11.1	5.2	VIII	VIII	37.04	121.88	CDMG 47459			36.909	121.76	yes	CDMG OSMS 90-01
		VIII	VI	19.93	115.10				19.43	155.30	no	USGS OF (unpubl.)
13.7	2.1		VI	19.93	115.02				19.70	155.08	no	USGS OF (unpubl.)
			V	19.93	115.02				20.07	155.06	no	USGS OF (unpubl.)
8.5	3.4		VIII	19.35	155.07	USGS			19.73	155.10	TH	
1.7	1.4	VIII	VIII	46.62	111.97	USGS 2202	CIT B025	CGS	46.58	112.03	yes	Mont BMG Mem 51
1.7	1.5	VIII	VIII	46.62	111.97	USGS 2202	CIT B025	CGS	46.58	112.03	yes	Mont BMG Mem 51
0.61	0.25	VI	VI	42.50	71.60			TT350	43.45	71.66	TH	
1.14	0.44	VI	VI	42.50	71.60			TT350	43.45	71.66	TH	
1.07	0.29	VI	VI	42.50	71.60			SMA-1	43.45	71.66	TH	
0.4	0.1		VI	34.31	81.33	USGS Temp.		SMA-1	34 30	81.22	yes	USGS OF 81-0448
0 3	0.2		VI	34.31	81.33	USGS Temp.		SMA-1	34 30	81.22	yes	USGS OF 81-0448
0.2	0.1		VI	34.31	81.33	USGS Temp.		SMA-1	34 30	81.22	yes	USGS OF 81-0448
0 2	0.1		VI	34.31	81.33	USGS Temp.		SMA-1	34 30	81 22	yes	USGS OF 81-0448
0.5	0.3		VI	34.31	81.33	USGS Temp.		SMA-1	34 30	81 22	yes	USGS OF 81-0448
21.5	18.0	VIII	VIII	47.17	122.62	2101	CIT B029	CGS	47 03	122.90	yes	CIT EERL

A1.

UNITED STATES ACCELEROGRAMS (approximately 200 gal or greater or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG	DEP km	EPI km	HYP km
WAS	2	490413	1955	Western Wash.	Olympia Hwy Test Lab	Soft	7.9	70	17	
WAS	3	490413	1955	Western Wash.	Seattle Army Base	Soft	7.9	70	62	
WAS	4	490413	1955	Western Wash.	Seattle Army Base	Soft	7.9	70	62	
WAS	5	650429	1528	Puget Sound	Olympia Hwy Test Lab	Soft	6.5	59	50	
WAS	6	650429	1528	Puget Sound	Olympia Hwy Test Lab	Soft	6.5	59	50	



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EPI km	HYP km	TR deg	HOR gal	VEL cm/s	DISP cm	DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STATIO
						g5%	g10%	EPI	STA	LAT	LONG				LAT
17		176	162	21.4	8.5	22.0	18.0	VIII	VIII	47.17	122.62	2101	CIT B029	CGS	47.03
62		182	67	8.2	2.4	16.0	0.0	VIII	VIII	47.17	122.62	2106	CIT B028	CGS	47.55
62		272	66	7.9	2.7	13.0	0.0	VIII	VIII	47.17	122.62	2106	CIT B028	CGS	47.55
60		266	194	12.7	3.8	14.0	4.8	VIII	VII	47.41	122.29	2101	CIT B032	CGS	47.03
60		176	134	8.0	3.8	12.4	3.6	VIII	VII	47.41	122.29	2101	CIT B032	CGS	47.03

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STA NO.	RECORD NO.	INSTR	STATION LOCATION		COPY	REFERENCES
			LAT	LONG		
2101	CIT B029	CGS	47.03	122.90	yes	CIT EERL
2106	CIT B028	CGS	47.55	122.34	yes	CIT EERL
2106	CIT B028	CGS	47.55	122.34	yes	CIT EERL
2101	CIT B032	CGS	47.03	122.90	yes	USGS OF 75-375
2101	CIT B032	CGS	47.03	122.90	yes	USGS OF 75-375

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km	H k
AKA	1	710502	624	Andreanof Is.	Adak Navy Base Seis-Vlt	Hard	7.1	43	70	
ALG	1	801108	854	El-Asnam AftShk	Sogedia Food Proc Fcty	Soft	5.6	10	17	
ARG	1	771123	927	San Juan, W. Arg.	INPRES, San Juan	Soft	7.4	12	70	
ARG	2	771123	927	San Juan, W. Arg.	INPRES, San Juan	Soft	7.4	12	70	
CAN	1	820331	2102	Miramichi AftShk	Holmes Lake, Site 1	Hard	4.8	7	7	
CAN	2	820331	2102	Miramichi AftShk	Mitchell Lk Rd, Site 2	Hard	4.8	7	5	
CAN	3	820331	2102	Miramichi AftShk	Loggie Lodge, Site 3	Hard	4.8	7	4	
CAN	4	820331	2102	Miramichi AftShk	Loggie Lodge, Site 3	Hard	4.8	7	4	
CAN	5	820331	2102	Miramichi AftShk	Indian Brook, Site 4	Hard	4.8	7		
CAN	6	820331	2102	Miramichi AftShk	Indian Brook, Site 4	Hard	4.8	7	3	
CAN	7	851109	446	Nahanni, NWT	Slide Mt, Site 2	Hard	4.8	10	6	
CAN	8	851109	446	Nahanni, NWT	Slide Mt, Site 2	Hard	4.8	10	3	
CAN	9	851223	516	Nahanni, NWT	Iverson, Site 1	Hard	6.9	6	8	
CAN	10	851223	516	Nahanni, NWT	Iverson, Site 1	Hard	6.9	6	8	
CAN	11	851223	516	Nahanni, NWT	Slide Mt, Site 2	Hard	6.9	6	7	
CAN	12	851223	516	Nahanni, NWT	Slide Mt, Site 2	Hard	6.9	6	7	
CAN	13	851223	516	Nahanni, NWT	Battlement Crk, Site 3	Hard	6.9	6	23	
CAN	14	851223	516	Nahanni, NWT	Battlement Crk, Site 3	Hard	6.9	6	23	
CAN	15	851223	548	Nahanni, NWT	Iverson, Site 1	Hard	6.4	10	8	
CAN	16*	881125	2346	Saguenay, QUE	Chicoutimi-Nord	Rock	6.0	20	43	
CAN	17*	881125	2346	Saguenay, QUE	Chicoutimi-Nord	Rock	6.0	20	43	
CAN	18*	881125	2346	Saguenay, QUE	St-André-du-Lac	Rock	6.0	20	64	
CAN	19*	881125	2346	Saguenay, QUE	Les Eboulements	Rock	6.0	20	90	
CAN	20*	881125	2346	Saguenay, QUE	Les Eboulements	Rock	6.0	20	90	
CAN	21	881125	2346	Saguenay, QUE	Baie-St-Paul	Soft	6.0	20	91	
CAN	22	881125	2346	Saguenay, QUE	Baie-St-Paul	Soft	6.0	20	91	

of exceptional interest)

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ION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR ga	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
Seis-Vlt	Hard	7.1	43	70	82	270	183	8.0	5.3	8.1	3.7	IV	IV	51.40	177.20
oc Fcty	Soft	5.6	10	17	20		211			5.4	2.5		VII		
an	Soft	7.4	12	70	71	90	190	20.59	5.90	49.6	23.0	IX	VII	31.13	67.98
an	Soft	7.4	12	70	71	180	187	15.57	4.19	49.0	20.5	IX	VII	31.13	67.98
te 1	Hard	4.8	7	7	10	288	340	1.37	0.1	1.3	1.1	VIII	VII		
Site 2	Hard	4.8	7	5	9	28	231	1.91	0.05	1.4	0.9	VIII	VI		-
ite 3	Hard	4.8	7	4	8	99	564	4.11	0.18	1.6	0.9	VIII	VIII		
ite 3	Hard	4.8	7	4	8	189	292	1.80	0.06	1.7	0.6	VIII	VIII		
te 4	Hard	4.8	7		8	321	417	2.72	0.06	1.0	0.4	VIII	VIII		
te 4	Hard	4.8	7	3	8	231	405	3.11	0.12	1.3	0.4	VIII	VIII		
	Hard	4.8	10	6	12	330	374	4 74	0.14	1 1	0.4	VIII	VIII	62.21	124.27
	Hard	4.8	10	6	12	240	451	5.86	0.19	0.5	0.4	VIII	VIII	62.21	124.27
	Hard	6.9	6	8	10	10	1080	46.17	10.41	11.7	8.9	IX	IX	62.19	124.24
	Hard	6.9	6	8	10	280	1319	45.06	15.25	13.9	10.8	IX	IX	62.19	124.24
	Hard	6.9	6	7	9	330	382	32 60	5.02	14 5	9.5	IX	VIII	62.19	124.24
	Hard	6.9	6	7	9	240	534	30.27	6.60	14.1	12.7	IX	VIII	62.19	124.24
Site 3	Hard	6.9	6	23	24	360	190	3.43	0.80	15.4	10 5	IX	VI	62.19	124.24
Site 3	Hard	6 9	6	23	24	270	182	6.29	2.38	15.9	7.8	IX	VI	62.19	124.24
	Hard	6.4	10	8	13	10	224	6.78	0.41	4.6	0.4	VIII	VI	62.19	124.24
	Rock	6.0	20	43	47	124	129	2.52	0 20	13.7	5.9			48.12	71.18
	Rock	6 0	20	43	47	214	104	1 51	0 08	12 1	0 1			48.12	71 18
	Rock	6.0	20	64	67	360	153	1 83	0.07	7 0	3.1			48 12	71 18
s	Rock	6.0	20	90	92	360	123	4.40	0.32	5 0	1 2			48.12	71.18
s	Rock	6.0	20	90	92	270	100	2.65	0 18	27 3	0.1			48.12	71 18
	Soft	6.0	20	91	93	85	171	5 34	0 87	9.9	2.7			48.12	71 18
	Soft	6 0	20	91	93	175	123	3 76	0 56	10.6	0 6			48.12	71 18

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Sep'90

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
.1	3.7	IV	IV	51.40	177.20	USGS 2701		AR240	51.88	176.58	yes	USGS OF 76-609
.4	2.5		VII								T.H.	
6	23.0	IX	VII	31.13	67.98			AR240			yes	Rojahn et al(unpub)
0	20.5	IX	VII	31.13	67.98			AR240			yes	Rojahn et al(unpub)
3	1.1	VIII	VII					SMA-1	46.95	66.59	yes	Can EPB OF 82-31
4	0.9	VIII	VI					SMA-1	47.02	66.37	yes	Can EPB OF 82-31
6	0.9	VIII	VIII					SMA-1	46.58	66.32	yes	Can EPB OF 82-31
7	0.6	VIII	VIII					SMA-1	46.58	66.32	yes	Can EPB OF 82-31
0	0.4	VIII	VIII					SMA-1	46.58	66.34	yes	Can EPB OF 82-31
3	0.4	VIII	VIII					SMA-1	46.58	66.34	yes	Can EPB OF 82-31
1	0.4	VIII	VIII	62.21	124.27			SMA-1	62.23	124.17	yes	GS Can OFR86-1-PGC
5	0.4	VIII	VIII	62.21	124.27			SMA-1	62.23	124.17	yes	GS Can OFR86-1-PGC
7	8.9	IX	IX	62.19	124.24			SMA-1	62.20	124.37	yes	GS Can OFR86-1-PGC
9	10.8	IX	IX	62.19	124.24			SMA-1	62.20	124.37	yes	GS Can OFR86-1-PGC
5	9.5	IX	VIII	62.19	124.24			SMA-1	62.23	124.17	yes	GS Can OFR86-1-PGC
1	12.7	IX	VIII	62.19	124.24			SMA-1	62.23	124.17	yes	GS Can OFR86-1-PGC
4	10.5	IX	VI	62.19	124.24			SMA-1			yes	GS Can OFR86-1-PGC
9	7.8	IX	VI	62.19	124.24			SMA-1			yes	GS Can OFR86-1-PGC
6	0.4	VIII	VI	62.19	124.24			SMA-1	62.20	124.37	yes	GS Can OFR86-1-PGC
7	5.9			48.12	71.18	16		SMA-1	48.49	71.01	yes	GS Can OFR-1996
1	0 1			48.12	71.18	16		SMA-1	48.49	71.01	yes	GS Can OFR-1996
0	3.1			48.12	71.18	17		SMA-1	48.32	71.99	yes	GS Can OFR-1996
0	1.2			48.12	71.18	20		SMA-1	47.55	70 33	yes	GS Can OFR-1996
3	0 1			48.12	71 18	20		SMA-1	47 55	70.33	yes	GS Can OFR-1996
9	2.7			48.12	71.18	7		SMA-1	47 44	70 51	yes	GS Can OFR-1996
6	0 6			48 12	71.18	7		SMA-1	47 44	70 51	yes	GS Can OFR-1996

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km
CAN	23*	881125	2346	Saguenay, QUE	La Malbaie	Rock	6.0	20	93	95
CAN	24*	881125	2346	Saguenay, QUE	St-Fereol	Rock	6.0	20	114	116
CHL	1	710709	303	Central Chile	UC Santiago, Phys.Lab	Soft	6.5	40	136	142
CHL	2	850303	2247	Offshr Valparaiso	El Amendral/Valp'o	Soft	7.8	33	67	75
CHL	3	850303	2247	Offshr Valparaiso	El Amendral/Valp'o	Soft	7.8	33	67	75
CHL	4	850303	2247	Offshr Valparaiso	Hualane'	Soft	7.8	33	137	141
CHL	5	850303	2247	Offshr Valparaiso	Hualane'	Soft	7.8	33	137	141
CHL	6	850303	2247	Offshr Valparaiso	Iloca	Hard	7.8	33	134	138
CHL	7	850303	2247	Offshr Valparaiso	Iloca	Hard	7.8	33	134	138
CHL	8	850303	2247	Offshr Valparaiso	La Ligua	Soft	7.8	33	140	144
CHL	9	850303	2247	Offshr Valparaiso	Llay-Llay	Soft	7.8	33	123	127
CHL	10	850303	2247	Offshr Valparaiso	Llay-Llay	Soft	7.8	33	123	127
CHL	11*	850303	2247	Offshr Valparaiso	Llolleo	Rock	7.8	33	34	47
CHL	12*	850303	2247	Offshr Valparaiso	Llolleo	Rock	7.8	33	34	47
CHL	13	850303	2247	Offshr Valparaiso	Los Vilos/Vina del Mar	Hard	7.8	33	74	81
CHL	14	850303	2247	Offshr Valparaiso	Melipilla	Hard	7.8	33	68	76
CHL	15	850303	2247	Offshr Valparaiso	Melipilla	Hard	7.8	33	68	76
CHL	16*	850303	2247	Offshr Valparaiso	Papudo	Rock	7.8	33	126	130
CHL	17	850303	2247	Offshr Valparaiso	Peldehue	Hard	7.8	33	126	130
CHL	18	850303	2247	Offshr Valparaiso	Pichilemu	Hard	7.8	33	77	84
CHL	19	850303	2247	Offshr Valparaiso	Pichilemu	Hard	7.8	33	77	84
CHL	20	850303	2247	Offshr Valparaiso	Quintay		7.8	33	51	61
CHL	21	850303	2247	Offshr Valparaiso	Quintay		7.8	33	51	61
CHL	22	850303	2247	Offshr Valparaiso	Rapel	Hard	7.8	33	37	50
CHL	23	850303	2247	Offshr Valparaiso	San Felipe	Soft	7.8	33	143	147
CHL	24	850303	2247	Offshr Valparaiso	San Felipe	Soft	7.8	33	143	147

or of exceptional interest)

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ATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR ga	HOR VEL	HOR DIS?	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
	Rock	6.0	20	93	95	63	122	4.65	0.41	6.1	0.1			48.12	71.18
	Rock	6.0	20	114	116	360	119	2.71	0.11	3.4	0.1			48.12	71.18
Phys.Lab	Soft	6.5	40	136	142	350	156	23.2	10.3	21.3	2.7		VII	32.51	71.21
'alp'o	Soft	7.8	33	67	75	50	288			58.2	45.9	VIII	VIII	33.16	71.98
'alp'o	Soft	7.8	33	67	75	50	160			58.2	43.9	VIII	VIII	33.16	71.98
	Soft	7.8	33	137	141		167					VIII	VI	33.16	71.98
	Soft	7.8	33	137	141		137					VIII	VI	33.16	71.98
	Hard	7.8	33	134	138		274					VIII	VII	33.16	71.98
	Hard	7.8	33	134	138		216					VIII	VII	33.16	71.98
	Soft	7.8	33	140	144	290	173	7.47	1.15	80.0	60.0	VIII	VII	33.16	71.98
	Soft	7.8	33	12.	127	280	465	36.66	6.40	80.0	60.0	VIII	VII	33.16	71.98
	Soft	7.8	33	123	127	190	345	41.79	8.40	80.0	60.0	VIII	VII	33.16	71.98
	Rock	7.8	33	34	47	10	656			74.7	55.3	VIII	VIII	33.16	71.98
	Rock	7.8	33	34	47	100	418			67.6	51.2	VIII	VIII	33.16	71.98
del Mar	Hard	7.8	33	74	81		235					VIII	VII	33.16	71.98
	Hard	7.8	33	68	76		658			56.0	46.9	VIII	VIII	33.16	71.98
	Hard	7.8	33	68	76		587			57.6	45.6	VIII	VIII	33.16	71.98
	Rock	7 8	33	126	130	140	226	12.41	1.59	58.8	46.3	VIII	VI	33.16	71.98
	Hard	7.8	33	126	130		627					VIII	VII	33.16	71.98
	Hard	7.8	33	77	84		261					VIII	VII	33.16	71.98
	Hard	7.8	33	77	84		176					VIII	VII	33.16	71.98
		7.8	33	51	61		196					VIII	VI	33.16	71 98
		7.8	33	51	61		176					VIII	VI	33.16	71.98
	Hard	7.8	33	37	50		304					VIII	VII	33.16	71.98
	Soft	7 8	33	143	147	80	425	17.77	3 50	49.9	43.0	VIII	VII	33.16	71 98
	Soft	7 8	33	143	147	170	303	16 17	3.58	48.9	43.2	VIII	VII	33.16	71 98

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
5.1	0.1			48.12	71.18	8		SMA-1	47.66	70.15	yes	GS Can OFR-1996
5.4	0.1			48.12	71.18	1		SMA-1	47.13	70.83	yes	GS Can OFR-1996
1.3	2.7		VII	32.51	71.21		WWC		33.47	70.67	yes	USGS OF 76-609
1.2	45.9	VIII	VIII	33.16	71.98			SMA-1	33.01	71.38	yes	USGS OF 87-195
1.2	43.9	VIII	VIII	33.16	71.98			SMA-1	33.01	71.38	yes	USGS OF 87-195
		VIII	VI	33.16	71.98			SMA-1	34.97	71.82	VS	UILU-ENG-87-2002
		VIII	VI	33.16	71.98			SMA-1	34.97	71.82	VS	UILU-ENG-87-2002
		VIII	VII	33.16	71.98				34.92	72.22	VS	UILU-ENG-87-2002
		VIII	VII	33.16	71.98				34.92	72.22	VS	UILU-ENG-87-2002
0	60.0	VIII	VII	33.16	71.98			SMA-1	32.50	71.10	VS	UILU-ENG-87-2002
0	60.0	VIII	VII	33.16	71.98			SMA-1	32.83	70.97	yes	USGS OF 87-195
0	60.0	VIII	VII	33.16	71.98			SMA-1	32.83	70.97	yes	USGS OF 87-195
7	55.3	VIII	VIII	33.16	71.98			SMA-1	33.41	71.36	yes	USGS OF 87-195
6	51.2	VIII	VIII	33.16	71.98			SMA-1	33.41	71.36	yes	USGS OF 87-195
		VIII	VII	33.16	71.98			SMA-1	31.92	71.50	VS	UILU-ENG-87-2002
0	46.9	VIII	VIII	33.16	71.98			SMA-1	33.41	71 13	VS	UILU-ENG-87-2002
6	45.6	VIII	VIII	33.16	71.98			SMA-1	33 41	71 13	VS	UILU-ENG-87-2002
8	46 3	VIII	VI	33.16	71.98			SMA-1	32.51	71 45	yes	USGS OF 87-195
		VIII	VII	33.16	71.98			DG-2	33 13	70.68	VS	UILU-ENG-87-2002
		VIII	VII	33.16	71.98				34.38	72 02	VS	UILU-ENG-87-2002
		VIII	VII	33.16	71.98				34 38	72 02	VS	UILU-ENG-87-2002
		VIII	VI	33.16	71.98				33.27	71 32	VS	UILU-ENG-87-2002
		VIII	VI	33.16	71.98				33.27	71 32	VS	UILU-ENG-87-2002
		VIII	VII	33.16	71.98			RFT-250	34 02	71 67	VS	UILU-ENG-87-2002
9	43 0	VIII	VII	33.16	71.98			SMA-1	32 75	70 73	yes	USGS OF 87-195
9	43.2	VIII	VII	33.16	71 98			SMA-1	32 75	70 73	VS	UILU-ENG-87-2002

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km
CHL	25	850303	2247	Offshr Valparaiso	San Fernando	Soft	7.8	33	129	13
CHL	26	850303	2247	Offshr Valparaiso	San Fernando	Soft	7.8	33	129	13
CHL	27	850303	2247	Offshr Valparaiso	San Pedro		7.8	33	74	8
CHL	28	850303	2247	Offshr Valparaiso	San Pedro		7.8	33	74	8
CHL	29	850303	2247	Offshr Valparaiso	Talca	Soft	7.8	33	186	18
CHL	30	850303	2247	Offshr Valparaiso	Talca	Soft	7.8	33	186	18
CHL	31	850303	2247	Offshr Valparaiso	Valparaiso	Hard	7.8	33	67	7
CHL	32	850303	2247	Offshr Valparaiso	Valparaiso	Hard	7.8	33	67	7
CHL	33	850303	2247	Offshr Valparaiso	Ventanas	Soft	7.8	33	100	10
CHL	34	850303	2247	Offshr Valparaiso	Ventanas	Soft	7.8	33	100	10
CHL	35	850303	2247	Offshr Valparaiso	Vina del Mar	Hard	7.8	33	74	8
CHL	36	850303	2247	Offshr Valparaiso	Vina del Mar	Hard	7.8	33	74	8
CHL	37	850303	2247	Offshr Valparaiso	Zapallar	Hard	7.8	33	117	12
CHL	38	850303	2247	Offshr Valparaiso	Zapallar	Hard	7.8	33	117	12
CHL	39*	850303	2347	Valparaiso Aftshk	Llolleo	Rock	5.5	33	34	4
CHL	40*	850303	2347	Valparaiso Aftshk	Llolleo	Rock	5.5	33	34	4
CHI										
GRE	1	720917	1407	Cephalonia Is.	Cephalonia	Hard	6.2	19	18	2
GRE	2	721030	1432	Cephalonia Is.	Cephalonia	Hard	5.5	13	22	2
GRE	3	731104	1552	Leukas Island	Leukas Island	Soft	6.0	13	20	2
GRE	4	731104	1552	Leukas Island	Leukas Island	Soft	6.0	13	20	2
GRE	5	780620	2004	Thessaloniki	Thess City Hotel Bsmt	Soft	6.4	19	21	3
GRE	6	780620	2004	Thessaloniki	Thess City Hotel Bsmt	Soft	6.4	19	21	28
GRE	7	810224	1057	Gulf of Corinth	Connth	Soft	6.7	11	20	
GRE	8	810224	1057	Gulf of Corinth	Corinth	Soft	6.7	11	20	
GRE	9	860913	1724	Kalamata	Kalamata-1	Soft	6.2	8	9	

ptional interest)

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	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR ge	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG	
	Soft	7.8	33	129	133		333					VIII	VII	33.16	71.98	
	Soft	7.8	33	129	133		225					VIII	VII	33.16	71.98	
		7.8	33	74	81		588					VIII	VI	33.16	71.98	
		7.8	33	74	81		559					VIII	VI	33.16	71.98	
	Soft	7.8	33	186	189	10	168	8.89	1.36	31.6	11.8	VIII	VII	33.16	71.98	
	Soft	7.8	33	186	189	280	164	11.86	3.47	24.5	15.2	VIII	VII	33.16	71.98	
	Hard	7.8	33	67	75	160	176			36.1	11.4	VIII	VIII	33.16	71.98	U
	Hard	7.8	33	67	75	70	161			36.5	22.1	VIII	VIII	33.16	71.98	U
	Soft	7.8	33	100	105		176					VIII	VI	33.16	71.98	II
	Soft	7.8	33	100	105		176					VIII	VI	33.16	71.98	II
	Hard	7.8	33	74	81	200	350			58.7	46.7	VIII	VIII	33.16	71.98	
	Hard	7.8	33	74	81	290	224			61.4	45.2	VIII	VIII	33.16	71.98	
	Hard	7.8	33	117	122		323					VIII	VI	33.16	71.98	
	Hard	7.8	33	117	122		314					VIII	VI	33.16	71.98	
	Rock	5 5	33	34	47	10	102	10.88	1.59	16.8	6.2			33.16	71.98	
	Rock	5.5	33	34	47	100	187	13.4	1.96	21.1	7.6			33.16	71.98	
	Hard	6.2	19	18	26		170	8.0	1.8	3.6	2.1	VII	VII	38.2	20.4	
	Hard	5.5	13	22	26		165	8.2	4.3	1.8	0.1	V	V	38.3	20.4	
	Soft	6.0	13	20	24		530	65.0	26.8	9.8	1.7	VIII	VII	38.87	20.54	
	Soft	6 0	13	20	24		257	30.0	12.0	14.4	8.4	VIII	VII	38.87	20.54	
	Soft	6 4	19	21	33		157			7 6	4.5	IX	VIII	41.09	22.30	
	Soft	6 4	19	21	28		145			8.0	1.0	IX	VIII	41.09	22.30	
	Soft	6.7	11	20	23	305	281	24.6	6.4	16.1	6.7	IX	VIII	38.06	53.20	
	Soft	6 7	11	20	23	35	234	22 5	6.7	17 2	6 1	IX	VIII	38 06	53.20	
	Soft	6.2	8	9	12	350	268	23.66	5.34	7 9	3 5	IX	IX			

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URATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
	g10%	EPI	STA	LAT	LONG				LAT	LONG		
		VIII	VII	33.16	71.98			SMA-1	34.60	71.00	VS	UILU-ENG-87-2002
		VIII	VII	33.16	71.98			SMA-1	34.60	71.00	VS	UILU-ENG-87-2002
		VIII	VI	33.16	71.98				32.60	71.00	VS	UILU-ENG-87-2002
		VIII	VI	33.16	71.98				32.60	71.00	VS	UILU-ENG-87-2002
	11.8	VIII	VII	33.16	71.98				35.43	70.67	VS	UILU-ENG-87-2002
	15.2	VIII	VII	33.16	71.98				35.43	70.67	VS	UILU-ENG-87-2002
	11.4	VIII	VIII	33.16	71.98	UFSM		SMA-1	33.01	71.38	yes	USGS OF 87-195
	22.1	VIII	VIII	33.16	71.98	UFSM		SMA-1	33.01	71.38	yes	USGS OF 87-195
		VIII	VI	33.16	71.98	II			32.67	71.62	VS	UILU-ENG-87-2002
		VIII	VI	33.16	71.98	II			32.67	71.62	VS	UILU-ENG-87-2002
	46.7	VIII	VIII	33.16	71.98			SMA-1	33.03	71.58	yes	USGS OF 87-195
	45.2	VIII	VIII	33.16	71.98			SMA-1	33.03	71.58	yes	USGS OF 87-195
		VIII	VI	33.16	71.98			SMA-1	32.57	71.47	VS	UILU-ENG-87-2002
		VIII	VI	33.16	71.98			SMA-1	32.57	71.47	VS	UILU-ENG-87-2002
	6.2			33.16	71.98			SMA-1	33.41	71.36	yes	USGS OF 87-195
	7.6			33.16	71.98			SMA-1	33.41	71.36	yes	USGS OF 87-195
	2.1	VII	VII	38.2	20.4			SMAC-B			VS	USGS OF 78-1022
	0.1	V	V	38.3	20.4			SMAC-B			VS	USGS OF 78-1022
	1.7	VIII	VII	38.87	20.54		73-11				VS	USGS OF 78-1022
	8.4	VIII	VII	38.87	20.54		73-11				VS	USGS OF 78-1022
	4.5	IX	VIII	41.09	22.30			SMA-1			VS	USGS Cir. 785-B
	1 0	IX	VIII	41.09	22.30			SMA-1			VS	USGS Cir. 785-B
	6.7	IX	VIII	38.06	53.20			SMA-1			yes	EERI Recon Rpt
	6 1	IX	VIII	38.06	53.20			SMA-1			yes	EERI Recon Rpt
	3.5	IX	IX				KAL-1	SMA-1			yes	EQe Spectra 3·2

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR.	MAG Mb	DEP km	EPI km
GRE	10	860913	1724	Kalamata	Kalamata-1	Soft	6.2	8	9
GRE	11	860915	1141	Kalamata AftShk	Kalamata-1	Soft	5.4	8	1
GRE	12	860915	1141	Kalamata AftShk	Kalamata-1	Soft	5.4	8	1
GRE	13	860915	1141	Kalamata AftShk	Kalamata-2	Soft	5.4	8	1
GRE	14	860915	1141	Kalamata AftShk	Kalamata-2	Soft	5.4	8	1
IND	1	671211	2251	Koyna	Koyna Dam	Hard	6.5	8	9
IND	2	671211	2251	Koyna	Koyna Dam	Hard	6.5	8	9
IRN	1	780916	1536	Tabas	Tabas	Soft	7.4	10	3
IRN	2	780916	1536	Tabas	Tabas	Soft	7.4	10	3
IRN	3	780916	1536	Tabas	Dayhook	Soft	7.4	10	17
IRN	4	780916	1536	Tabas	Dayhook	Soft	7.4	10	17
ITA	1	720614	1855		Rocca-R	Soft	5.2	6	
ITA	2	720614	1885		Rocca-R	Soft	5.2	6	
ITA	3	720614	2100	Friuli	Ancona-Rocca	Soft	4.7	21	
ITA	4	720614	2100	Friuli	Ancona-Rocca	Soft	4.7	21	
ITA	5	720621	1506	Friuli	Palombina	Soft	4.4	4	
ITA	6	720621	1506	Fnuli	Palombina	Soft	4.4	4	
ITA	7	760506	2000	Fnuli	Tolmezzo			26	
ITA	8	760511	2244	Friuli	Forgaria/Comino	Soft	5.2	19	
ITA	9	760511	2244	Fri	Forgaria/Comino	Soft	5.2	19	
ITA	10	760911	1631	Fnuli	Tarcento	Soft	5 2	17	
ITA	11	760911	1635	Fnuli	Forgaria/Comino	Soft	5.3	24	
ITA	12	760911	1635	Fnuli	Buia	Soft	5.4	24	
ITA	13	760915	315	Fnuli	Forgaria/Comino	Soft	5.7	16	
ITA	14	760915	315	Friuli	Forgaria/Comino	Soft	5 7	16	
ITA	15	760915	921	Fnuli	Forgaria/Comino	Soft	5.4	17	

r, or of exceptional interest)

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CATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR gs	HOR VEL	HOR DISP	DURATION		INTENSITY		EPICENTER	
										g5%	g10%	EPI	STA	LAT	LON
	Soft	6.2	8	9	12	80	235	32.33	7.18	5.6	2.3	IX	IX		
	Soft	5.4	8	1	8	80	233	21.72	1.61	3.7	1.0	VIII	VIII		
	Soft	5.4	8	1	8	350	136	7.93	0.77	1.6	0.7	VIII	VIII		
	Soft	5.4	8	1	8	284	258	24.42	3.66	1.5	1.1	VIII	VIII		
	Soft	5.4	8	1	8	14	158	12.75	1.34	2.7	0.3	VIII	VIII		
	Hard	6.5	8	9	12		620	13.6		10.2	6.8	VIII	VIII	17.30	- 73.
	Hard	6.5	8	9	12		498	12.3		10.4	6.2	VIII	VII	17.30	73.
	Soft	7.4	10	3	11		925	111.2	79.6	20.0	17.0	X	X	33.34	57.
	Soft	7.4	10	3	11		860	97.3	39.6	20.0	16.0	X	X	33.34	57.
	Soft	7.4	10	17	20		383	27.5	10.5	39.0	37.0	X	IX	33.34	57.
	Soft	7.4	10	17	20		372	36.7		36.0	35.0	X	IX	33.34	57.
	Soft	5.2	6				402								
	Soft	5.2	6				381								
ca	Soft	4.7	21				314								
ca	Soft	4.7	21				199								
	Soft	4.4	4				393								
	Soft	4.4	4				201								
			26				370								
ino	Soft	5.2	19				310								
ino	Soft	5.2	19				190								
	Soft	5.2	17				208								
ino	Soft	5.3	24				230								
	Soft	5.4	24				297								
ino	Soft	5.7	16				331								
ino	Soft	5.7	16				294								
ino	Soft	5 4	17				464								

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DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
.6	2.3	IX	IX				KAL-1	SMA-1			yes	EQe Spectra 3:2
.7	1.0	VIII	VIII				KAL-1	SMA-1			yes	EQe Spectra 3:2
.6	0.7	VIII	VIII				KAL-1	SMA-1			yes	EQe Spectra 3:2
.5	1.1	VIII	VIII				KAL-2	SMA-1			yes	EQe Spectra 3:2
.7	0.3	VIII	VIII				KAL-2	SMA-1			yes	EQe Spectra 3:2
.2	6.8	VIII	VIII	17.30	73.44				17.24	73.45	VS	Comm.Experts Rpt
.4	6.2	VIII	VIII	17.30	73.44				17.24	73.45	VS	Comm.Experts Rpt
0	17.0	X	X	33.34	57.40			SMA-1	33.28	56.92	T.H.	Niazi, 1986
.	16.0	X	X	33.34	57.40			SMA-1	33.28	56.92	T.H.	Niazi, 1986
0	37 0	X	IX	33.34	57.40			SMA-1	33.28	57.52	T.H.	Niazi, 1986
.0	35.0	X	IX	33.34	57.40			SMA-1	33.28	57.52	T.H.	Niazi, 1986
											VS	CNEN-ENEL
											VS	CNEN-ENEL
											VS	
											VS	
											VS	
											VS	
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A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EI ki
ITA	16	760915	921	Friuli	Forgaria/Cornino	Soft	5.4	17	
ITA	17	760915	921	Friuli	San Rocco	Hard	5.4	22	
ITA	18	760915	921	Friuli	Tarcento	Soft	5.4	22	
ITA	19	760915		Friuli	Buia	Soft			
ITA	20	801123	1934	Campania-Lucania	Sturno	Hard	6.5	18	
ITA	21	801123	1934	Campania-Lucania	Sturno	Hard	6.5	18	
ITA	22	801123	1934	Campania-Lucania	Bagnoli Irpino	Hard	6.5	18	
ITA	23	801123	1934	Campania-Lucania	Bagnoli Irpino	Hard	6.5	18	
ITA	24	801123	1934	Campania-Lucania	Brienza	Soft	6.5	18	
ITA	25	801123	1934	Campania-Lucania	Brienza	Soft	6.5	18	
ITA	26	801123	1934	Campania-Lucania	Calitri	Hard	6.5	18	
ITA	27	801123	1934	Campania-Lucanic	Calitri	Hard	6.5	18	
JPN	1	640205	2030		Genken Kisho-Shitsu			60	
JPN	2	640205	2030		Genken Kisho-Shitsu			60	
JPN	3	641114	1456		Genken Kisho-Shitsu	Soft	4.9	40	
JPN	4	641114	1456		Genken Kisho-Shitsu	Soft	4.9	40	
JPN	5	650420	842		Genken Kisho-Shitsu	Soft	5.6	20	
JPN	6	660401			Ochiai Bridge-B	Soft			
JPN	7	660405	1751	Matsushiro M-53	Ochiai Bridge-B	Soft	5.1	4	
JPN	8	660405	1751	Matsushiro M-53	Ochiai Bridge-B	Soft	5.1	4	
JPN	9	660405	1751	Matsushiro M-53	Ochiai Bridge-C	Soft	5.1	4	
JPN	10	660405	1751	Matsushiro M-53	Hoshina-A Elem Sch	Soft	5.1	4	
JPN	11	660405	1751	Matsushiro M-53	Hoshina-A Elem Sch	Soft	5.1	4	
JPN	12	660405	1751	Matsushiro M-53	Wakaho Town Office	Soft	5.1	4	
JPN	13	660405	1751	Matsushiro M-53	Wakaho Town Office	Soft	5.1	4	
JPN	14	660417	1021	Matsushiro M-74	Hoshina-A Elem Sch	Soft	4.1	4	

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N	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR ga	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
	Soft	5.4	17				379								
	Hard	5.4	22				240								
	Soft	5.4	22				140								
	Soft														
	Hard	6.5	18	37	41	360	222	42.37		44.5	9.3	IX	VIII	40.75	15.23
	Hard	6.5	18	37	41	90	321	70.23	31.37	43.5	9.1	IX	VIII	40.75	15.23
	Hard	6.5	18	28	33	360	130	23.40		17.0	5.0	IX	VII	40.75	15.23
	Hard	6.5	18	28	33	90	187	35.33		10.6	5.2	IX	VII	40.75	15.23
	Soft	6.5	18	38	42	360	218	13.74		10.2	3.4	IX	VII	40.75	15.23
	Soft	6.5	18	38	42	90	165	12.16		9.2	7.1	IX	VII	40.75	15.23
	Hard	6.5	18	26	32	360	156	26.02		48.1	38.8	IX	VIII	40.75	15.23
	Hard	6.5	18	26	32	90	173	29.01		53.4	41.7	IX	VIII	40.75	15.23
su			60				175	14.01	19.41	13.6	1.5	VI	IV	140.9	36.3
su			60				105								
su	Soft	4.9	40				261								
su	Soft	4 9	40				233								
su	Soft	5.6	20				110								
	Soft						230								
	Soft	5.1	4				210								
	Soft	5.1	4				190								
	Soft	5.1	4				230								
ch	Soft	5.1	4	4			602	24.9	3.7	3.6	2.6	VI	VI	36.58	138.32
ch	Soft	5.1	4	4			331	12.0	0.9	3.0	2.2	VI	VI	36.58	138.32
ice	Soft	5.1	4	3			278	17 3	2.0	3.6	2.1	VI	VI	36.58	138.32
ice	Soft	5 1	4	3			264	20.5	3.7	3.9	2.8	VI	VI	36 58	138.32
ch	Soft	4.1	4				331	9.2	0.5	0.9	0.4	VI	VI	36.53	138.23

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
											VS	
											VS	
											VS	
											VS	
5	9.3	IX	VIII	40.75	15.23	ENEA-ENEL		SMA-1	41.02	15.11	yes	Berardi et al,1981
5	9.1	IX	VIII	40.75	15.23	ENEA-ENEL		SMA-1	41.02	15.11	yes	Berardi et al,1981
0	5.0	IX	VII	40.75	15.23	ENEA-ENEL		SMA-1	40.67	15.07	yes	Berardi et al,1981
6	5.2	IX	VII	40.75	15.23	ENEA-ENEL		SMA-1	40.67	15.07	yes	Berardi et al,1981
2	3.4	IX	VII	40.75	15.23	ENEA-ENEL		SMA-1	40.47	15.63	yes	Berardi et al,1981
2	7.1	IX	VII	40.75	15.23	ENEA-ENEL		SMA-1	40.47	15.63	yes	Berardi et al,1981
1	38.8	IX	VIII	40.75	15.23	ENEA-ENEL		SMA-1	40.92	15.44	yes	Berardi et al,1981
4	41.7	IX	VIII	40.75	15.23	ENEA-ENEL		SMA-1	40.92	15.44	yes	Berardi et al,1981
5	1 5	VI	IV	140.9	36.3	KT001		SMAC			TH	DIG SM JPN, 1972
											TH	
3	2.6	VI	VI	36.58	138.32			DC3C	36 61	138 27	TH	SEMOC Mat. No 1
)	2.2	VI	VI	36.58	138.32			DC3C	36.61	138.27	TH	SEMOC Mat. No.1
3	2.1	VI	VI	36.58	138.32			DC3C	36 65	138 26	TH	SEMOC Mat. No.1
)	2 8	VI	VI	36.58	138.32			DC3C	36 65	138 26	TH	SEMOC Mat. No.1
)	0 4	VI	VI	36 53	138.23			DC3C	36 61	138 27	TH	SEMOC Mat. No 1

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km
JPN	15	660502	45	Matsushiro M-95	Hoshina-A Elem Sch	Soft	4.5	4		
JPN	16	660520			Ochiai Bridge-B	Soft				
JPN	17	660520	930	Matsushiro M-123	Matsushiro-C Town Off	Soft	4.1	6	4	
JPN	18	660520	930	Matsushiro M-123	Matsushiro-C Town Off	Soft	4.1	6	4	
JPN	19	660520	930	Matsushiro M-123	Hoshina-A Elem Sch	Soft	4.1	6	3	
JPN	20	660520	930	Matsushiro M-123	Hoshina-A Elem Sch	Soft	4.1	6	3	
JPN	21	660528	1421	Matsushiro M-147	Matsushiro-C Town Off	Soft	4.5	3	2	
JPN	22	660528	1421	Matsushiro M-147	Matsushiro-C Town Off	Soft	4.5	3	2	
JPN	23	660612	943	Matsushiro M-169	Hoshina-B	Soft	4.6	7	7	
JPN	24	660612	943	Matsushiro M-169	Hoshina-B	Soft	4.6	7	7	
JPN	25	660619	455	Matsushiro M-186	Hoshina-B	Soft	4.2	5	6	
JPN	26	660626	1634	Matsushiro M-192	Wakaho Town Office	Soft	4.5	5	5	
JPN	27	660626	1634	Matsushiro M-192	Wakaho Town Office	Soft	4.5	5	5	
JPN	28	660710	1544	Matsushiro M-219	Hoshina-B	Soft	4.4	5	2	
JPN	29	660710	1544	Matsushiro M-219	Hoshina-B	Soft	4.4	5	2	
JPN	30	660803	348	Matsushiro M-262	Matsushiro-C Town Off	Soft	5.0	3	7	
JPN	31	660803	348	Matsushiro M-262	Matsushiro-C Town Off	Soft	5.0	3	7	
JPN	32	660808	937	Matsushiro M-270	Hoshina-B	Soft	4.7	6	2	
JPN	33	660808	937	Matsushiro M-270	Hoshina-B	Soft	4.7	6	2	
JPN	34	660829	1037	Matsushiro M-329	Hoshina-B	Soft	4.4	3	5	
JPN	35	660829	1037	Matsushiro M-329	Hoshina-B	Soft	4.4	3	5	
JPN	36	660914	626	Matsushiro M-425	Hoshina-B	Soft	4.5	2	3	
JPN	37	660914	626	Matsushiro M-425	Hoshina-B	Soft	4.5	2	3	
JPN	38	671119	2107		Genken Kisho-Shitsu	Soft	5.7	50		
JPN	39	671119	2107		Genken Kisho-Shitsu	Soft	5.7	50		
JPN	40	680330	404		Wakayama-JI-S	Soft	4.7	12	5	

· of exceptional interest)

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ION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR ga	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
ı Sch	Soft	4.5	4				387	10.0	0.6	0.8	0.3	VI	VI	36.55	138.32
	Soft						300								
own Off	Soft	4.1	6	4			245	18.8	1.8	4.8	2.5	VI	VI	36.57	138.27
own Off	Soft	4.1	6	4			243	15.9	1.7	5.0	0.7	VI	VI	36.57	138.27
ı Sch	Soft	4.1	6	3			323	7.3	0.6	1.4	1.0	VI	VI	36.57	138.27
ı Sch	Soft	4.1	6	3			302	5.7	0.6	1.5	0.4	VI	VI	36.57	138.27
own Off	Soft	4.5	3	2			380	34.0	7.6	6.8	5.5	VII	VII	36.55	138.22
own Off	Soft	4.5	3	2			273	28.6	2.9	9.2	3.9	VII	VII	36.55	138.22
	Soft	4.6	7	7			262	8.5	0.4	1.6	1.2	VI	VI	36.53	138.30
	Soft	4.6	7	7			204	6.6	0.4	1.8	1.4	VI	VI	36.53	138.30
	Soft	4.2	5	6			301	7.3	0.3	1.2	0.7	IV	IV		
Office	Soft	4.5	5	5			276	16.7	2.1	3.0	0.9	V	V	36.55	138.25
Office	Soft	4.5	5	5			265	17.6	22.4	3.0	0.9	V	V	36.55	138.25
	Soft	4.4	5	2			224	8.4	0.5	1.4	0.7	VI	VI		
	Soft	4.4	5	2			202	9 4	0.6	1.7	0.6	VI	VI		
own Off	Soft	5.0	3	7			223	22.3	4.2	5.2	2.2	VII	VII		
own Off	Soft	5.0	3	7			190	22.1	4.2	6.0	4.2	VII	VII		
	Soft	4.7	6	2			448	21.8	1.5	1.6	0.9	V	V		
	Soft	4 7	6	2			284	10.5	0.6	1 9	1.0	V	V		
	Soft	4.4	3	5			432	17.4	1.3	2.2	0.8	V	V		
	Soft	4.4	3	5			208	10.5	0.7	2.2	1.3	V	V		
	Soft	4.5	2	3			251	8.0	0.6	1.5	0.7	V	V		
	Soft	4.5	2	3			245	11.1	1.1	1.3	1.2	V	V		
hitsu	Soft	5.7	50				469								
hitsu	Soft	5.7	50				340								
	Soft	4.7	12	5	5		442						VI	34.2	135.1

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
8	0.3	VI	VI	36.55	138.32			DC3C	36.61	138.27	TH	SEMOC Mat. No.1
9	2.5	VI	VI	36.57	138.27			DC3C	36.58	138.19	TH	SEMOC Mat. No.1
0	0.7	VI	VI	36.57	138.27			DC3C	36.58	138.19	TH	SEMOC Mat. No.1
4	1.0	VI	VI	36.57	138.27			DC3C	36.61	138.27	TH	SEMOC Mat. No.1
5	0.4	VI	VI	36.57	138.27			DC3C	36.61	138.27	TH	SEMOC Mat. No.1
3	5.5	VII	VII	36.55	138.22			DC3C	36.58	138.19	TH	SEMOC Mat. No.1
2	3.9	VII	VII	36.55	138.22			DC3C	36.58	138.19	TH	SEMOC Mat. No.1
5	1.2	VI	VI	36.53	138.30			DC3C	36.61	138.30	TH	SEMOC Mat. No.1
3	1.4	VI	VI	36.53	138.30			DC3C	36.61	138.30	TH	SEMOC Mat. No.1
2	0.7	IV	IV					DC3C	36.61	138.30	TH	SEMOC Mat. No.1
0	0.9	V	V	36.55	138.25			DC3C	36.65	138.26	TH	SEMOC Mat. No.1
0	0.9	V	V	36.55	138.25			DC3C	36.65	138.26	TH	SEMOC Mat. No.1
1	0.7	VI	VI					DC3C	36.61	138.30	TH	SEMOC Mat. No.1
7	0.6	VI	VI					DC3C	36.61	138.30	TH	SEMOC Mat. No.1
2	2.2	VII	VII					DC3C	36.58	138.19	TH	SEMOC Mat. No.1
0	4.2	VII	VII					DC3C	36.58	138.19	TH	SEMOC Mat. No.1
5	0.9	V	V					DC3C	36.61	138 30	TH	SEMOC Mat. No.1
0	1.0	V	V					DC3C	36.61	138.30	TH	SEMOC Mat. No.1
2	0.8	V	V					DC3C	36.61	138 30	TH	SEMOC Mat. No.1
2	1 3	V	V					DC3C	36.61	138 30	TH	SEMOC Mat. No 1
5	0.7	V	V					DC3C	36.61	138 30	TH	SEMOC Mat. No.1
0	1 2	V	V					DC3C	36.61	138.30	TH	SEMOC Mat No.1
			VI	34.2	135.1							

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km
JPN	41	680330	404		Wakayama-JI-S	Soft	4.7	12	5
JPN	42	680401	942		Hososhima-S	Soft	6.2	35	
JPN	43	680401	942		Hososhima-S	Soft	6.2	35	
JPN	44	680401	942		Itajima Bridge	Soft	6.2	35	
JPN	45	680401	942		Itajima Bridge	Soft	6.2	35	
JPN	46	680516	949	Tokachi-Ok.	Aomori-S	Soft	8.0	19	—
JPN	47	680516	949	Tokachi-Ok.	Aomori-S	Soft	8.0	19	
JPN	48	680516	949	Tokachi-Ok.	Hachinohe-S	Soft	8.0	19	
JPN	49	680516	949	Tokachi-Ok.	Hachinohe-S	Soft	8.0	19	
JPN	50	680516	949	Tokachi-Ok.	Hachinohe Harbor	Soft	8.0	19	
JPN	51	680516	949	Tokachi-Ok.	Hachinohe Harbor	Soft	8.0	19	
JPN	52	680516	949	Tokachi-Ok.	Muroran-S	Hard	8.0	19	
JPN	53	680516	949	Tokachi-Ok.	Muroran-S	Hard	8.0	19	
JPN	54	680516	949	Tokachi-Ok.	Miyako-S	Hard	8.0	19	
JPN	55	680516	1939		Shinishikari Bridge	Soft	6.1	19	
JPN	56	680516	1939		Muroran-S	Soft	6.4	19	
JPN	57	680806	117		Itajima Bridge	Soft	6.3	48	
JPN	58	680806	117		Itajima Bridge	Soft	6.3	48	
JPN	59	700121	233		Horoman Bridge	Hard	6.3	50	
JPN	60	710613	1306		Genken Kisho-Shitsu	Soft	5.5	55	
JPN	61	730617	1255		Kushiro-S	Soft	7.4	40	132
JPN	62	780612	1714		Shiogama-Kogyo-S	Soft	7.5	30	
JPN	63	780612	1714		Shiogama-Kogyo-S	Soft	7.5	30	
JPN	64	780612	1714		Ofunato-Bochi-S	Hard	7.5	30	124
JPN	65	780612	1714		Ofunato-Bochi-S	Hard	7.5	30	124
JPN	66	780612	1714		Sendai Office, RTRI		7.4	30	

', or of exceptional interest)

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CATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR. deg	HR gs	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
JI-S	Soft	4.7	12	5	5		293						VI	34.2	135.1
;	Soft	6.2	35				352								
;	Soft	6.2	35				306								
ə	Soft	6.2	35				223								
ə	Soft	6.2	35				193								
	Soft	8.0	19		243		253					VIII	VIII		---
	Soft	8.0	19		243		197					VIII	VIII		
	Soft	8.0	19		188		312					VIII	VIII		
	Soft	8.0	19		188		206					VIII	VIII		
arbor	Soft	8.0	19				225	40.33	182.38	33.2	25.7	VIII	VII	40.73	143.5
arbor	Soft	8.0	19				183	43.06	105.38	26.3	6.6	VIII	VII	40.73	143.5
	Hard	8.0	19		218		460								
	Hard	8.0	19				423								
	Hard	8.0	19				219								
ridge	Soft	6.1	19				193								
	Soft	6.4	19				182						VII		
;	Soft	6.3	48				823								
;	Soft	6.3	48				752								
ige	Hard	6.3	50				241								
ɔ-Shitsu	Soft	5.5	55				248								
	Soft	7 4	40	132			219	27.7	7.9	42.6			VIII	42.9	146.0
gyo-S	Soft	7.5	30				314					VIII			
gyo-S	Soft	7 5	30				287					VIII			
ni-S	Hard	7.5	30	124			221					VIII	VIII	38.15	142.4
ni-S	Hard	7.5	30	124			206					VIII	VIII	38.15	142.4
), RTRI		7.4	30				306					VIII			

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
			VI	34.2	135.1							
		VIII	VIII									
		VIII	VIII									
		VIII	VIII									
		VIII	VIII									
2	25.7	VIII	VII	40.73	143.58			SMAC			VS	DIG SM JPN, 1972
3	6.6	VIII	VII	40.73	143.58			SMAC			VS	DIG SM JPN, 1972
			VII									
6			VII	42.9	146 0							
		VIII										
		VIII										
		VIII	VIII	38.15	142.4							
		VIII	VIII	38.15	142.4							
		VIII										

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

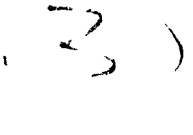
ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km
JPN	67	780612	1714		Sendai Office, RTRI		7.4	30	
JPN	68	780612	1714		Kaihoku Bridge		7.4	30	
JPN	69	780612	1714		Kaihoku Bridge		7.4	30	
JPN	70	780612	1714		Shiogama Office		7.4	30	
JPN	71	780612	1714		Shiogama Office		7.4	30	
JPN	72	780612	1714		Sendai Sumitomo Bldg		7.4	30	
JPN	73	780612	1714		Sendai Sumitomo Bldg		7.4	30	
JPN	74	780612	1714		Tohoku Univ. BRI	Soft	7.4	30	118
JPN	75	780612	1714		Tohoku Univ. BRI	Soft	7.4	30	118
MEX	1*	651209	607		Acapulco Pellandini	Rock	6.0	35	50
MEX	2*	651209	607		Acapulco Pellandini	Rock	6.0	35	50
MEX	3	710905	913		Acapulco SOP	Hard	5.2	50	
MEX	4	710905	913		Acapulco SOP	Hard	5.2	50	
MEX	5	730828	950		Oaxaca Fac Med	Soft	7.3	84	
MEX	6	730828	950		Oaxaca Fac Med	Soft	7.3	84	
MEX	7	741006	1709		Acapulco SOP	Hard	5.0	20	12
MEX	8	741006	1709		Acapulco SOP	Hard	5.0	20	12
MEX	9	741117	2257		Acapulco SOP	Hard	4.7	33	
MEX	10	751105	1704		Tuxtla/Gutierrez	Soft	5.0		
MEX	11	751105	1704		Tuxtla/Gutierrez	Soft	5.0		
MEX	12	780311		Mexicali Valley	Victoria, Baja Calif	Soft	4.9		
MEX	13	780311		Mexicali Valley	Victoria, Baja Calif	Soft	4 9		
MEX	14	780312		Mexicali Valley	Victoria, Baja Calif	Soft			
MEX	15	780312		Mexicali Valley	Victoria, Baja Calif	Soft			
MEX	16	780312		Mexicali Valley	Victoria, Baja Calif	Soft			
MEX	17	780312		Mexicali Valley	Victoria, Baja Calif	Soft			

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TION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR. deg	HR ga	HOR VEL.	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
RTRI		7.4	30				238					VIII			
		7.4	30				200					VIII			
		7.4	30				294					VIII			
a		7.4	30				266					VIII			
a		7.4	30				288					VIII			
no Bldg		7.4	30				253					VIII			
no Bldg		7.4	30				227					VIII			
RI	Soft	7.4	30	118			240					VIII			
RI	Soft	7.4	30	118			190					VIII			
dini	Rock	6.0	35	50	61	360	230	20.4				VI	VI	16.56	100.15
dini	Rock	6.0	35	50	61	90	130	4.40				VI	VI	16.56	100.15
	Hard	5.2	50		57	270	230	5.06						17.09	99.81
	Hard	5.2	50		57	360	167	2.99						17.09	99.81
d	Soft	7.3	84		156	360	199	9.67						18.27	96.60
d	Soft	7.3	84		156	270	163	7.25						18.27	96.60
	Hard	5.0	20	12	21	270	529	13.94	0.45	3.1	1.4			16.80	99.80
	Hard	5.0	20	12	21	360	308	9.96	0.39	2.4	1.2			16.80	99.80
	Hard	4.7	33				127							17.00	100.10
	Soft	5 0			40	360	246	5.25						16.90	92.82
	Soft	5.0			40	270	172	5.26						16.90	92.82
slif	Soft	4 9					381								
slif	Soft	4 9					376								
slif	Soft						369								
slif	Soft						368								
slif	Soft						509								
slif	Soft						314								

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
		VIII										
		VIII										
		VIII										
		VIII										
		VIII										
		VIII										
		VIII										
		VIII										
		VIII										
		VI	VI	16.56	100.15	ACAP		AR240	16.84	99.91	VS	Bufaliza, 1984
		VI	VI	16.56	100.15	ACAP		AR240	16.84	99.91	VS	Bufaliza, 1984
				17.09	99.81	ACAS			16.86	99.89		Bufaliza, 1984
				17.09	99.81	ACAS			16.86	99.89		Bufaliza, 1984
				18.27	96.60	OAXM			17.08	96.72		Bufaliza, 1984
				18.27	96.60	OAXM			17.08	96.72		Bufaliza, 1984
3.1	1.4			16.80	99.80	ACAS			16.86	99.89	Yes	Anderson/Vetter,'89
2.4	1.2			16.80	99.80	ACAS			16.86	99.89	Yes	Anderson/Vetter,'89
				17.00	100.10	ACAS			16.86	99.89		
				16 90	92.82	TUXT			16.75	93.13		Bufaliza, 1984
				16.90	92.82	TUXT			16.75	93.13		Bufaliza, 1984
						VCTR			32 29	115 10		Anderson/Vetter,'89
						VCTR			32 29	115 10		Anderson/Vetter,'89
						VCTR			32.29	115 10		Anderson/Vetter,'89
						VCTR			32 29	115 10		Anderson/Vetter,'89
						VCTR			32 29	115 10		Anderson/Vetter,'89
						VCTR			32 29	115 10		Anderson/Vetter,'89



A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km
MEX	18	780319	139		Acapulco SOP	Hard	5.8	36	24
MEX	19	780319	139		Acapulco SOP	Hard	5.8	36	24
MEX	20*	780319	139		Acapulco Pellandini	Rock	5.8	36	27
MEX	21*	780319	139		Acapulco Pellandini	Rock	5.8	36	27
MEX	22	781129	1952	Oaxaca	Oaxaca Fac Med	Soft	6.4	20	
MEX	23	790314	1107		Sicartsa Caseta Maestro	Soft	6.5	20	
MEX	24	790314	1107		Sicartsa Caseta Maestro	Soft	6.5	20	
MEX	25	790314	1107		Sicartsa Caseta Testigo	Soft	6.5	20	100
MEX	26	790314	1107		Sicartsa Caseta Testigo	Soft	6.5	20	100
MEX	27	790314	1107		Sicartsa Acerac	Soft	6.5	20	
MEX	28*	790314	1107		Infiernillo Casa Maq	Rock	6.5	20	84
MEX	29*	790314	1107		Infiernillo Casa Maq	Rock	6.5	20	84
MEX	30	790314	1107		Ciudad Altamirano	Soft	6.5	20	
MEX	31*	800609		Cerro Prieto	CPRI	Rock	5.6	8	40
MEX	32*	800609		Cerro Prieto	CPRI	Rock	5.6	8	40
MEX	33	801024	1453		Oaxaca Fac Med	Soft	6.4	72	
MEX	34	810917	954		San Marcos/Guerrero	Soft	5.4	20	4
MEX	35	810917	954		San Marcos/Guerrero	Soft	5.4	20	4
MEX	36	810917	954		Acapulco SOP	Hard	5.4	20	
MEX	37	811025	322		Sicartsa Caseta Maestro	Soft	6.2	20	
MEX	38	811025	322		Sicartsa Caseta Maestro	Soft	6.2	20	
MEX	39	811025	322		Sicartsa Caseta Testigo	Soft	6.2	20	
MEX	40	811025	322		Sicartsa Caseta Testigo	Soft	6.2	20	
MEX	41	811025	322		Sicartsa Acerac	Soft	6.2	20	
MEX	42	811025	322		Infiernillo Potabiliz	Hard	6.2	20	
MEX	43	811025	322		Siderurgia Laz Card		6	20	

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TION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR ga	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
	Hard	5.8	36	24	44	270	744	11.46	0.71	15.8	7.0			17.03	99.75
	Hard	5.8	36	24	44	360	383	10.63	0.61	11.6	6.4			17.03	99.75
ıdini	Rock	5.8	36	27	45	270	315	13.22	0.35	6.8	5.7			17.03	99.75
ıdini	Rock	5.8	36	27	45	360	293	6.64	1.25	6.7	5.0			17.03	99.75
d	Soft	6.4	20			360	220							16.00	96.69
ı Maestro	Soft	6.5	20				293							17.46	101.46
ı Maestro	Soft	6.5	20				255							17.46	101.46
ı Testigo	Soft	6.5	20	100	102	270	307	23.05	2.82	14.5	9.7			17.81	101.28
ı Testigo	Soft	6.5	20	100	102	360	264	22.90	2.65	13.7	6.4			17.81	101.28
	Soft	6.5	20				153							17.46	101.46
Maq	Rock	6.5	20	84	84	LONG	120	11.97	1.76	4.4	0.5			17.46	101.46
Maq	Rock	6.5	20	84	84	TRAN	105	8.77	1.40	2.3	0.8			17.46	101.46
ıno	Soft	6.5	20				158							17.46	101.46
	Rock	5.6	8	40	41	45	529	31.72	8.11	15.6	7 7			32.20	114.99
	Rock	5.6	8	40	41	315	375	18.51	2.91	12.3	6.3			32.20	114.99
d	Soft	6.4	72				162							18.21	98.24
errero	Soft	5.4	20	4	17	360	305	9 54	0.64	8.7	3 2			16.80	99.43
errero	Soft	5.4	20	4	17	270	233	6.15	0.43	4.2	1.0			16.80	99.43
	Hard	5.4	20				206							16.16	99.83
Maestro	Soft	6.2	20				249							17.75	102.25
Maestro	Soft	6.2	20				233							17.75	102.25
Testigo	Soft	6.2	20				244							17.75	102.25
Testigo	Soft	6.2	20				208							17.75	102.25
	Soft	6.2	20				139							17.75	102.25
ılız	Hard	6.2	20				130							17 75	102 25
Card		6 2	20											17.75	102 25

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
15.8	7.0			17.03	99.75	ACAS			16.86	99.89	Yes	Anderson/Vetter,'89
11.6	6.4			17.03	99.75	ACAS			16.86	99.89	Yes	Anderson/Vetter,'89
6.8	5.7			17.03	99.75	ACAP			16.84	99.91	Yes	Anderson/Vetter,'89
6.7	5.0			17.03	99.75	ACAP			16.84	99.91	Yes	Anderson/Vetter,'89
				16.00	96.69	OAXM			17.09	96.72	TH	Espinosa et al,'78
				17.46	101.46	SICM			17.93	102.20		
				17.46	101.46	SICM			17.93	102.20		
14.5	9.7			17.81	101.28	SICC			17.93	102.20	Yes	Anderson/Vetter,'89
13.7	6.4			17.81	101.28	SICC			17.93	102.20	Yes	Anderson/Vetter,'89
				17.46	101.46	SICS			17.93	102.20		
4.4	0.5			17.46	101.46	INCM			18.27	101.90	Yes	Anderson/Vetter,'89
2.3	0.8			17.46	101.46	INCM			18.27	101.90	Yes	Anderson/Vetter,'89
				17.46	101.46				18.36	100.66		
15.6	7.7			32.20	114.99	UNAM			32.42	115 31	Yes	Anderson/Vetter,'89
12 3	6.3			32.20	114.99	UNAM			32.42	115 31	Yes	Anderson/Vetter,'89
				18.21	98.24	OAXM			17.08	96.72		
8.7	3.2			16.80	99.43	SMAR			16.80	99 40	Yes	Anderson/Vetter,'89
4.2	1 0			16.80	99.43	SMAR			16.80	99.40	Yes	Anderson/Vetter,'89
				16 16	99.83	ACAS			16.86	99.89		
				17.75	102.25	SICM			17.93	102.20		
				17 75	102.25	SICM			17.93	102.20		
				17.75	102.25	SICC			17.93	102.20		
				17.75	102.25	SICC			17.93	102.20		
				17.75	102.25	SICS			17.93	102.20		
				17.75	102.25	INPT			18.27	101.90		
				17.75	102.25							

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km
MEX	44*	840714			Acapulco Pellandini	Rock	5.2	35	74
MEX	45*	850919	1317	Guerrero	Caleta de Campos	Rock	6.8	20	28
MEX	46*	850919	1317	Guerrero	Caleta de Campos	Rock	6.8	20	28
MEX	47*	850919	1317	Guerrero	La Villita	Rock	6.8	20	84
MEX	48*	850919	1317	Guerrero	La Villita	Rock	6.8	20	84
MEX	49*	850919	1317	Guerrero	La Union	Rock	6.8	20	123
MEX	50*	850919	1317	Guerrero	La Union	Rock	6.8	20	123
MEX	51*	850919	1317	Guerrero	Zihuatanejo	Rock	6.8	20	168
MEX	52*	850919	1317	Guerrero	Papanoa	Rock	6.8	20	218
MEX	53*	850919	1317	Guerrero	Papanoa	Rock	6.8	20	218
MEX	54	850919	1317	Guerrero	El Paraiso	Rock	6.8	20	300
MEX	55	850919	1317	Guerrero	Zacatula	Soft	6.8	20	
MEX	56	850919	1317	Guerrero	Zacatula	Soft	6.8	20	
MEX	57	850919	1317	Guerrero	Mexico City TLHD	Soft	6.8	20	410
MEX	58	850919	1317	Guerrero	Mexico City TLHB	Soft	6.8	20	410
MEX	59	850919	1317	Guerrero	Mexico City TLHB	Soft	6.8	20	410
MEX	60	850919	1317	Guerrero	Mexico City SCT1	Soft	6.8	20	400
MEX	61*	850921	137	Guerrero #2	Papanoa	Rock	6.3	20	90
MEX	62*	850921	137	Guerrero #2	Papanoa	Rock	6.3	20	90
MEX	63*	850921	137	Guerrero #2	El Paraiso	Rock	6.3	20	154
MEX	64*	850921	137	Guerrero #2	El Paraiso	Rock	6.3	20	154
MEX	65*	850921	137	Guerrero #2	Zihuatanejo	Rock	6.3	20	46
MEX	66*	850921	137	Guerrero #2	Zihuatanejo	Rock	6.3	20	46
MEX	67*	851003	629	Guerrero #3	Papanoa	Rock	4.3	20	13
MEX	68*	860430	707	Guerrero #4	Caleta de Campos	Rock	6.2	20	32
MEX	69*	860616	551	Guerrero #5	Xaltianguis	Rock	4.5	20	11

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CATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR. deg	HR gs	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LON
ıllandini	Rock	5.2	35	74	82	270	109	3.99	0.33	0.9	0.1			17.44	99.(
ampos	Rock	6.8	20	28	38	90	141	14.3	4.6	28.8	10.0			13.08	102.9
ampos	Rock	6.8	20	28	38	180	140	19.1	8.0	30.8	10.0			18.08	102.9
	Rock	6.8	20	84	86	180	125	16.1	7.8	37.5	3.4			18.08	102.9
	Rock	6.8	20	84	86	90	122	11.0	4.4	36.0	0.2			18.08	102.9
	Rock	6.8	20	123	125	180	166	21.2	7.5	32.0	22.0			18.08	-102.9
	Rock	6.8	20	123	125	90	148	11.9	3.8	32.0	21.4			18.08	102.9
	Rock	6.8	20	168	169	270	154	18.1	3.7	20.0	2.2			18.08	102.9
	Rock	6.8	20	218	219	180	153	9.3	3.2	12.9	3.3			18.08	102.9
	Rock	6.8	20	218	219	270	110	6.0	1.8	9.5	4.5			18.08	102.9
	Rock	6.8	20	300	301	180	120	8.7	3.3	13.0	2.8			18.08	102.9
	Soft	6.8	20				271							18.08	102.9
	Soft	6.8	20				181							18.08	102.9
TLHD	Soft	6.8	20	410	410	360	118	34.9	20.7	28.0	4.5		VI	18.08	102.9
TLHB	Soft	6.8	20	410	410	360	136	64.1	36.6	31.0	12.0		VI	18.08	102.9
TLHB	Soft	6.8	20	410	410	270	107	44.5	39.3	36.0	1.0		VI	18.08	102.9
SCT1	Soft	6.8	20	400	400	270	168	60.5	21.9	35.0	22.0		VII	18.08	102.9
	Rock	6.3	20	90	92	180	243	9.1	2.9	11.9	6.1			17.16	101.1
	Rock	6.3	20	90	92	270	219	6.7	1.2	9.7	3.1			17.16	101.1
	Rock	6.3	20	154	155	180	625	10.0	0.9	12.3	5.7			17.16	101.1
	Rock	6.3	20	154	155	90	474	9.3	0.5	9 6	3 5			17.16	101.1
	Rock	6 3	20	46	50	180	153	13.5	2.6	10.6	2 6			17.16	101.1
	Rock	6.3	20	46	50	270	134	11.9	2.0	11.5	4.1			17.16	101.1
	Rock	4.3	20	13	26	270	135	2.1	0.1	0.5	0.0			17.28	101.1
ımpos	Rock	6.2	20	32	38	90	98	5 9	0.8	1 8	0 0			18 02	103.0
	Rock	4 5	20	11	36	180	166	1.6	0 0	0.4	0.1			17 08	99.6

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
0.9	0.1			17.44	99.60	ACAP			16.84	99.91	Yes	Anderson et al,'89
8.8	10.0			18.08	102.94	CALE	A5050	DSA1	18.07	102.76	Yes	Anderson et al,'89
0.8	10.0			18.08	102.94	CALE	A5050	DSA1	18.07	102.76	Yes	Anderson et al,'89
7.5	3.4			18.08	102.94		A5053	DSA1	18.05	102.18	Yes	Anderson et al,'89
6.0	0.2			18.08	102.94		A5053	DSA1	18.05	102.18	Yes	Anderson et al,'89
2.0	22.0			18.08	102.94		A5054	DSA1	17.98	101.81	Yes	Anderson et al,'89
2.0	21.4			18.08	102.94		A5054	DSA1	17.98	101.81	Yes	Anderson et al,'89
0.0	2.2			18.08	102.94		A5016	DCA333	17.60	101.46	Yes	Anderson et al,'89
2.9	3.3			18.08	102.94	PAPN	A5017	DCA333	17.33	101.04	Yes	Anderson et al,'89
9.5	4.5			18.08	102.94	PAPN	A5017	DCA333	17.33	101.04	Yes	Anderson et al,'89
3.0	2.8			18.08	102.94		A5056	DSA1	17.34	100.21	Yes	Anderson et al,'89
				18.08	102.94	ZACA						
				18.08	102.94	ZACA						
3.0	4.5		VI	18.08	102.94		4591	SMA-1	19.29	99.04	Yes	Mena et al,UNAM497
1.0	12.0		VI	18.08	102.94		4590	SMA-1	19.28	99.01	Yes	Mena et al,UNAM497
5.0	1 0		VI	18.08	102.94		4590	SMA-1	19.28	99.01	Yes	Mena et al,UNAM497
5.0	22.0		VII	18.08	102.94		144	DCA333	19.39	99.15	Yes	Mena et al,UNAM497
1 9	6.1			17.16	101.14	PAPN	A5024	DCA333	17.33	101.04	Yes	Anderson et al,'89
1 7	3.1			17.16	101.14	PAPN	A5024	DCA333	17.33	101.04	Yes	Anderson et al,'89
2.3	5.7			17.16	101.14	PARS	A5062	DSA1	17.34	100.21	Yes	Anderson et al,'89
1.6	3.5			17.16	101.14	PARS	A5062	DSA1	17.34	100.21	Yes	Anderson et al,'89
1 6	2.6			17.16	101.14		A5023	DCA333	17.60	101.46	Yes	Anderson et al,'89
5	4.1			17.16	101.14		A5023	DCA333	17.60	101.46	Yes	Anderson et al,'89
1 5	0.0			17.28	101.13	PARS	A5038	DCA333	17.33	101.04	Yes	Anderson et al,'89
8	0 0			18.02	103.06	CALE	A6031	DSA1	18.07	102.76	Yes	Anderson et al,'89
1 4	0.1			17.08	99.62		A6049	PDR1	17.10	99.72	Yes	Anderson et al,'89

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km	
MEX	70*	861214	728	Guerrero #6	La Llave	Rock	4.3	20	4	
MEX	71*	870207	345	Cerro Prieto,BC	Cerro Prieto	Rock	5.4	6	6	
MEX	72*	870207	345	Cerro Prieto,BC	Cerro Prieto	Rock	5.4	6	6	
MEX	73*	870402	1601	Guerrero #7	Cerro de Piedra	Rock	4.8	20	10	
MEX	74*	871025	431	Guerrero #8	Papanoa	Rock	4.4	20	11	
MEX	75*	880208	1351	Guerrero #9	Petatlan	Rock	5.5	20	24	
MEX	76*	880208	1351	Guerrero #9	Petatlan	Rock	5.5	20	24	
MEX	77*	880208	1351	Guerrero #9	Papanoa	Rock	5.5	20	29	
MEX	78*	880208	1351	Guerrero #9	Papanoa	Rock	5.5	20	29	
MEX	79*	880208	1351	Guerrero #9	La Llave	Rock	5.5	20	42	
MEX	80*	880208	1351	Guerrero #9	La Llave	Rock	5.5	20	42	
MEX	81*	880208	1351	Guerrero #9	Los Magueyes	Rock	5.5	20	64	
MEX	82*	880208	1351	Guerrero #9	El Paraiso	Rock	5.5	20	102	
MEX	83*	880208	1351	Guerrero #9	El Paraiso	Rock	5.5	20	102	
MEX	84*	880816	420	Guerrero #10	Cerro de Piedra	Rock	4.2	20	15	
MEX	85*	880816	420	Guerrero #10	Xaltianguis	Rock	4.2	20	31	
MEX	86*	880816	420	Guerrero #10	Xaltianguis	Rock	4.2	20	31	
MEX	87*	880926	2012	Guerrero #11	Papanoa	Rock	5.0	20	15	
MEX	88*	880926	2104	Guerrero #12	Papanoa	Rock	4.2	20	15	
NGU	1	721028	227	New Guinea	LAE PA'I		5.9	?		
NGU	2	740920	2120	New Guinea	Yonki/Upper Ramu	Soft	5.8	111	14	
NZE	1	730105	1354	New Zealand	Atene Valley	Soft	6.4	173		
NZE	2	870302	142	New Zealand	Matahina Dam-D		6.1	12		
NIC	1	720105	1155	Managua	Esso Refinery	Soft	4.3	5		
NIC	2	721223	629	Managua	Esso Refinery	Soft	5.6	6	5	
NIC	3	721223	629	Managua	Esso Refinery	Soft	5.6	5	5	

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ATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR. deg	HR ge	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
	Rock	4.3	20	4	21	90	105	1.9	0.1	0.4	0.1			17.37	100.81
	Rock	5.4	6	6	8	251	851	54.2	9.3	9.0	5.3	IX	IX	32.37	115.30
	Rock	5.4	6	6	8	161	1125	46.3	13.1	7.6	4.3	IX	IX	32.37	115.30
ra	Rock	4.8	20	10	22	90	103	2.2	0.1	0.3	0.0				
	Rock	4.4	20	11	22	360	161	2.5	0.1	0.5	0.2				
	Rock	5.5	20	24	31	90	238	3.8	0.2	5.3	1.5				
	Rock	5.5	20	24	31	180	147	3.6	0.4	6.1	4.6				
	Rock	5.5	20	29	36	360	435	9.2	0.6	8.7	4.4				
	Rock	5.5	20	29	36	90	337	7.7	0.6	7.1	4.1				
	Rock	5.5	20	42	47	180	298	10.0	0.5	3.3	2.5				
	Rock	5.5	20	42	47	90	221	6.7	0.3	4.2	2.0				
	Rock	5.5	20	64	67	180	102	2.9	0.2	2.8	0.1				
	Rock	5.5	20	102	104	90	247	4.4	0.1	6.0	1.7				
	Rock	5.5	20	102	104	180	211	4.1	0.2	5.6	3.3				
a	Rock	4.2	20	15	31	90	116	2.7	0.1	1.2	0.1				
	Rock	4.2	20	31	41	90	210	1.9	0.1	0.6	0.5				
	Rock	4.2	20	31	41	360	145	1.3	0.0	0.3	0.2				
	Rock	5.0	20	15	25	360	101	2.1	0.1	1.2	0.0				
	Rock	4.2	20	15	25	90	133	2.1	0.0	0.4	0.1				
		5.9	2				295							7.33	146.83
amu	Soft	5.8	111	14			225						VI	6.20	146.10
	Soft	6.4	173				153								
D		6.1	12				236								
	Soft	4.3	5		10	90	207	13.95	1.37	6.0	2.6		VII		
	Soft	5.6	6	5	8	90	351	35.08	13 81	13.0	8 5		VIII	12.16	86.25
	Soft	5.6	5	5	8	180	318	30 31	6.33	13.0	7.0		VIII	12.16	86.25

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
.4	0.1			17.37	100.81		A6073	DSA1	17.37	100.81	Yes	Anderson nt al,'89
.0	5.3	IX	IX	32.37	115.30	CPRI		SMA-1	32.42	115.30	Yes	CDMG OSMS 87-04
.6	4.3	IX	IX	32.37	115.30	CPRI		SMA-1	32.42	115.30	Yes	CDMG OSMS 87-04
.3	0.0					CPDR		DCA333	16.77	99.63	Yes	Anderson et al,'89
.5	0.2					PARS		DCA333	17.33	101.04	Yes	Anderson et al,'89
.3	1.5					PETA		DSA1	17.54	101.26	Yes	Anderson et al,'89
.1	4.6					PETA		DSA1	17.54	101.26	Yes	Anderson et al,'89
.7	4.4					PAPN		DCA333	17.33	101.04	Yes	Anderson et al,'89
1	4.1					PAPN		DCA333	17.33	101.04	Yes	Anderson et al,'89
3	2.5					LLAV		DSA1	17.37	100.81	Yes	Anderson et al,'89
.2	2.0					LLAV		DSA1	17.37	100.81	Yes	Anderson et al,'89
.8	0.1					MAGY		DSA1	17.38	100.58	Yes	Anderson et al,'89
.0	1.7					PARS		DSA1	17.34	100.21	Yes	Anderson et al,'89
6	3.3					PARS		DSA1	17.34	100.21	Yes	Anderson et al,'89
2	0.1					CPDR		DCA333	16.77	99 63	Yes	Anderson et al,'89
6	0.5					XALT		PDR1	17.10	99.72	Yes	Anderson et al,'89
3	0.2					XALT		PDR1	17.10	99.72	Yes	Anderson et al,'89
2	0.0					PAPN		DCA333	17.33	101 04	Yes	Anderson et al,'89
4	0 1					PAPN		DCA333	17 33	101.04	Yes	Anderson et al,'89
				7.33	146.83							Crouse et al
			VI	6.20	146.10			MO-2	6 25	145.98		Crouse et al
0	2 6		VII			ESSO		AR240	12 14	86 31	yes	USGS OF 78-941
0	8 5		VIII	12.16	86.25	ESSO		AR240	12 14	86 31	yes	USGS OF 78-941
0	7.0		VIII	12.16	86.25	ESSO		AR240	12 14	86 31	yes	USGS OF 78-941

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Ms	DEP km	EPI km
NIC	4	721223	719	Managua AftShk 1	Esso Refinery	Soft	5.2	11	5
NIC	5	721223	719	Managua AftShk 1	Esso Refinery	Soft	5.2	11	5
NIC	6	730331	2013	Managua AftShk 2	Natl Univ Managua	Soft	4-	5	3
NIC	7	730331	2013	Managua AftShk 2	Natl Univ Managua	Soft	4-	5	3
PER	1	661017	2141	Offshr, Cent.Peru	Geophys Inst, Lima	Soft	6.3	38	236
PER	2	661017	2141	Offshr, Cent.Peru	Geophys Inst, Lima	Soft	6.3	38	236
PER	3	741003	1421	Coast, Near Lima	Casa Huaco, Lima	Soft	6.6	13	91
PER	4	741003	1421	Coast, Near Lima	Casa Huaco, Lima	Soft	6.6	13	91
PER	5	741109	1259	Peru Coast	La Molina, Lima		7.2	6	103
ROC	1	760414	140		Wanchiu	Hard	6.3	8	23
ROC	2	760414	1400		Wanchiu	Hard	6.3	8	23
ROC	3	780809	1825		Juisui	Soft	5.9	13	15
ROC	4	780809	1825		Juisui	Soft	5.9	13	15
ROC	5	810129	451		SMART Event #5	Soft	6.5	11	30
ROC	6	810129	451		Lotung	Soft	6.5	11	30
ROC	7	810129	451		Lotung	Soft	6.5	11	30
ROC	8	811211	707		Tapan	Hard	5.0	5	14
ROC	9	811211	797		Tapan	Hard	5.0	5	14
ROC	10	850612	1722		SMART Event #33	Soft	5.2	3	
ROC	11	850920	1601		SMART Event #36	Soft	5.3	6	
ROC	12	860116	1304		SMART Event #39	Soft	5.5	10	
ROC	13	860116	1304		SMART Event #39	Soft	5.5	10	
ROC	14	860520			SMART Event #40	Soft	6.1	16	
ROC	15	860520			SMART Event #40	Soft	6.1	16	
ROC	16	860717	3		SMART Event #42	Soft	5.0	2	
ROC	17	860730	1131		SMART Event #43	Soft	5.6	2	

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TION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR ga	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
	Soft	5.2	11	5	12	180	320	21.06	5.93	7.0	2.9		VIII	12.16	86.2
	Soft	5.2	11	5	12	90	277	26.89	9.37	7.9	4.6		VIII	12.16	86.2
sgua	Soft	4-	5	3	6	90	538	30.60	2.25	5.5	3.0		VIII	12.10	86.3
sgua	Soft	4-	5	3	6	360	238	12.05	0.65	2.6	1.7		VIII	12.10	86.3
Lima	Soft	6.3	38	236	239	8	269	21.6	16.6	16.0	6.0	XI	VII	10.74	78.6
Lima	Soft	6.3	38	236	239	278	181	13.23	7.4	12.0	6.0	XI	VII	10.74	78.6
ima	Soft	6.6	13	91	92	90	207	16.94	8.03	5.3	4.0	IX	VIII	12.24	77.5
ima	Soft	6.6	13	91	92	360	192	20.48	7.93	5.2	3.8	IX	VIII	12.24	77.5
a		7.2	6	103	103		117	7.89	2.43	7.5	2.0		VII	12.5	77.8
	Hard	6.3	8	23	24	270	360	13.8	2.1	1.4	0.7		VIII	23.35	120.6
	Hard	6.3	8	23	24	360	299	11 6	1.7	1.7	1.0		VIII	23.35	120.6
	Soft	5.9	13	15	20	82	223	13.2	2.6	0.1	1.1		VII	23.50	121.5
	Soft	5.9	13	15	20	352	165	11.3	2.0	1 7	0.7		VII	23.50	121.5
5	Soft	6.5	11	30	32		244						VII	24.42	121.8
	Soft	6.5	11	30	32	290	186	9.8	1.4	5.1	0.8		VII	24.43	121.9
	Soft	6.5	11	30	32	20	175	15.1	2.5	8.2	1.5		VII	24.43	121.9
	Hard	5.0	5	14	15	270	257	5.5	1.0	1 7	0.5		VII	24.26	121.1
	Hard	5.0	5	14	15	360	220	4.4	1 7	1 0	0.5		VII	24.26	121.1
33	Soft	5.2	3				158								
36	Soft	5.3	6				121								
39	Soft	5 5	10				327								
39	Soft	5.5	10				258								
40	Soft	6.1	16				266								
40	Soft	6.1	16				224								
42	Soft	5.0	2				151								
43	Soft	5.6	2				301								

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
7.0	2.9		VIII	12.16	86.25	ESSO		AR240	12.14	86.31	yes	USGS OF 78-941
7.9	4.6		VIII	12.16	86.25	ESSO		AR240	12.14	86.31	yes	USGS OF 78-941
5.5	3.0		VIII	12.10	86.30	3502	6	AR240	12.10	86.27	yes	USGS OF (unpubl.)
2.6	1.7		VIII	12.10	86.30	3502	6	AR240	12.10	86.27	yes	USGS OF (unpubl.)
6.0	6.0	XI	VII	10.74	78.63	4302	2	CGS	12.07	77.04	yes	USGS OF 77-587
2.0	6.0	XI	VII	10.74	78.63	4302	2	CGS	12.07	77.04	yes	USGS OF 77-587
5.3	4.0	IX	VIII	12.24	77.58	4304	8	SMA-1	12.13	76.98	yes	USGS OF 77-587
5.2	3.8	IX	VIII	12.24	77.58	4304	8	SMA-1	12.13	76.98	yes	USGS OF 77-587
7.5	2.0		VII	12.5	77.8	4305		SMA	12.08	76.95	yes	USGS OF 77-587
1.4	0.7		VIII	23.35	120.67				23.19	120.52	yes	ROC Vol. 1
1.7	1.0		VIII	23.35	120.67				23.19	120.52	yes	ROC Vol. 1
0.1	1.1		VII	23.50	121.50				23.52	121.36	yes	ROC Vol. 1
1.7	0.7		VII	23.50	121.50				23.52	121.36	yes	ROC Vol. 1
			VII	24 42	121.88	002					T.H.	
3.1	0.8		VII	24.43	121.90				24.68	121.76	yes	ROC Vol. 2
3.2	1.5		VII	24.43	121.90				24.68	121.76	yes	ROC Vol. 2
1 7	0.5		VII	24.26	121.18				24.15	121.11	yes	ROC Vol. 3
1.0	0.5		VII	24.26	121.18				24.15	121.11	yes	ROC Vol. 3
											T.H	
											T H.	
											T H.	
											T.H.	
											T.H.	
											T H.	
											T H.	
											T H	

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EP km
ROC	18	860730	1131		SMART Event #43	Soft	5.6	2	
ROC	19	861114	2120		SMART Event #45	Soft	6.2	7	
ROC	20	861114	2120		SMART Event #45	Soft	6.2	7	
ROM	1	770304	1921	Vrancea, E. Rom.	BRI Bucharest	Soft	7.2	110	16
ROM	2	770304	1921	Vrancea, E. Rom.	BRI Bucharest	Soft	7.2	110	16
RUS	1	760517	259	Uzbek/Gazli	Kysylkum Pt/K Desert	Hard	7.3	14	3
RUS	2	760517	259	Uzbek/Gazli	Kysylkum Pt/K Desert	Hard	7.3	14	3
SAL	1	861010	1749		Natl Geog Inst	Soft	5.4	8	
SAL	2	861010	1749		Natl Geog Inst	Soft	5.4	8	
SAL	3	861010	1749		Geotech Inv Ctr	Soft	5.4	8	
SAL	4	861010	1749		Geotech Inv Ctr	Soft	5.4	8	
SAL	5	861010	1749		Inst Urban Constr	Soft	5.4	8	
SAL	6	861010	1749		Inst Urban Constr	Soft	5.4	8	
SAL	7	861010	1749		Hotel Camino Real bsmt	Soft	5.4	8	
SAL	8	861010	1749		Hotel Camino Real bsmt	Soft	5.4	8	
SAL	9	861010	1749		Centro Amer Univ	Soft	5.4	8	
SAL	10	861010	1749		Centro Amer Univ	Soft	5.4	8	
SAL	11	861010	1749		Hotel Sheraton	Hard	5.4	8	
SAL	12	861010	1749		Hotel Sheraton	Hard	5.4	8	
SOL	1	830318	905	Bougainville	BVE 80,Panguna, Sol.Is	Hard	7.9	89	27
SOL	2	830318	905	Bougainville	BVE 80,Panguna, Sol.Is	Hard	7.9	89	27
TKY	1	760819	105	Denizli	Denizli	Soft	5.0	10	1
TKY	2	760819	105	Denizli	Denizli	Soft	5.0	10	1
TKY	3	771216		Izmir	Izmir	Soft	5.3	10	
TKY	4	790718	1013	Dursunbey	Dursunbey		5.2	10	1
TKY	5	790718	1013	Dursunbey	Dursunbey		5.2	10	1

ar, or of exceptional interest)

David J. Leeds
DJLA 90-21-14

)CATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR ga	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LOI
ent #43	Soft	5.6	2				244								
ent #45	Soft	6.2	7				251								
ent #45	Soft	6.2	7				178								
est	Soft	7.2	110	166	199	180	202	75.11	20.06	9.3	2.4	IX	VII	45.83	26.
est	Soft	7.2	110	166	199	90	175	32.62	10.60	11.9	5.0	IX	VII	45.83	26.
t/K Desert	Hard	7.3	14	32	35		717	57.74	50.8	14.0	13.0		IX	40.35	63.
t/K Desert	Hard	7.3	14	32	35		609	67.22	27.9	14.5	13.5		IX	40.35	63.
nst	Soft	5.4	8	6	10	270	525	72.7	10.6	8.8	4.8	IX	IX	13.67	89.
nst	Soft	5.4	8	6	10	180	392	56.1	17.8	8.2	4.2	IX	IX	13.67	89.
Ctr	Soft	5.4	8	4	9	90	681	80.0	11.9	8.0	6.0	IX	IX	13.67	89.
Ctr	Soft	5.4	8	4	9	180	412	61.8	14.8	6.6	3.9	IX	IX	13.67	89.
Constr	Soft	5.4	8	5	9	180	668	55.6	7.1	5.8	4.0	IX	IX	13.67	89.
Constr	Soft	5.4	8	5	9	90	380	39.2	9.8	4.3	3.2	IX	IX	13.67	89.
o Real bsmt	Soft	5.4	8	5	9	360	421	45.5	13 4	4.7	3.8	IX	IX	13.67	89.
o Real bsmt	Soft	5.4	8	5	9	90	339	32.3	4.2	4.7	1 8	IX	IX	13.67	89.2
Univ	Soft	5.4	8	4	9	90	409	48.8	11.6	6.2	4.7	IX	IX	13.67	89.2
Univ	Soft	5 4	8	4	9	180	374	32.9	6 2	6.8	4.2	IX	IX	13.67	89.2
on	Hard	5.4	8	6	10	270	296	26.3	4.4	6.5	3.0	IX	VII	13.67	89.2
on	Hard	5.4	8	6	10	360	214	17.7	4.6	5.7	1.9	IX	VII	13.67	89.2
una, Sol.ls	Hard	7.9	89	271	285	360	284	28.6	3.6	45.9	24.8		VIII	4.83	153.5
una, Sol.ls	Hard	7 9	89	271	285	90	270	17.9	2.6	39.8	21.7		VIII	4.83	153.5
	Soft	5.0	10	10	14	90	262	14.88	2.26			VI	VI	37.71	29.0
	Soft	5 0	10	10	14	360	335	21.35	2.67	6.6	4 3	VI	VI	37 71	29.0
	Soft	5.3	10	7	12		217	10.17	5.08	0.9	0.4		VII		
		5.2	10	10	14		200	32.13	33.19	3.6	2.2				
		5 2	10	10	14		271	33 07	32 18	2 7	1.1				

eads
21-14

Sep'9

DURATION		INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
g5%	g10%	EPI	STA	LAT	LONG				LAT	LONG		
											T.H.	
											T.H.	
											T.H.	
9.3	2.4	IX	VII	45.83	26.72	1		SMAC-B			yes	USGS OF 78-1022
11.9	5.0	IX	VII	45.83	26.72	1		SMAC-B			yes	USGS OF 78-1022
14.0	13.0		IX	40.35	63.45						VS	Niazi, 1986
14.5	13.5		IX	40.35	63.45						VS	Niazi, 1986
8.8	4.8	IX	IX	13.67	89.20	IGN-5		SMA-1	13.71	89.17		CDMG OSMS 86-07
8.2	4.2	IX	IX	13.67	89.20	IGN-5		SMA-1	13.71	89.17		CDMG OSMS 86-07
8.0	6.0	IX	IX	13.67	89.20	CIG-6		SMA-1	13.70	89.18	yes	CDMG OSMS 86-07
6.6	3.9	IX	IX	13.67	89.20	CIG-6		SMA-1	13.70	89.18	yes	CDMG OSMS 86-07
5.8	4.0	IX	IX	13.67	89.20	IVU-13		AR240	13.72	89.21	yes	CDMG OSMS 86-07
4.3	3.2	IX	IX	13.67	89.20	IVU-13		AR240	13.72	89.21	yes	CDMG OSMS 86-07
4 7	3 8	IX	IX	13.67	89.20	HCR-14		SMA-1	13.71	89.22	yes	CDMG OSMS 86-07
4.7	1 8	IX	IX	13.67	89.20	HCR-14		SMA-1	13 71	89.22	yes	CDMG OSMS 86-07
6.2	4.7	IX	IX	13.67	89.20	UCA-16		SMA-1	16.68	89.24	yes	CDMG OSMS 86-07
6.8	4.2	IX	IX	13.67	89.20	UCA-16		SMA-1	16.68	89.24	yes	CDMG OSMS 86-07
6.5	3.0	IX	VII	13.67	89.20	HSH-18		SMA-1	13.71	89.24	yes	CDMG OSMS 86-07
5.7	1.9	IX	VII	13.67	89.20	HSH-18		SMA-1	13 71	89.24	yes	CDMG OSMS 86-07
45.9	24.8		VIII	4.83	153.58			SMA-1			yes	USGS OF 85-261
39.8	21 7		VIII	4.83	153.58			SMA-1			yes	USGS OF 85-261
		VI	VI	37.71	29.0			SMA-1	37 76	29 21	no	BSSA 72:1635
6.6	4 3	VI	VI	37.71	29.0			SMA-1	37 76	29 21	yes	BSSA 72:1635
0.9	0 4		VII					SMA-1			VS	Ergunay et al 1985
3 6	2 2							SMA-1			VS	Ergunay et al 1985
2 7	1 1							SMA-1			VS	Ergunay et al 1985

A2. WORLD ACCELEROGRAMS (Approximately 200 gal or greater, or of exceptional interest)

ID	NO.	DATE	TIME	EARTHQUAKE	LOCATION	SITE CHAR	MAG Mb	DEP km	EPI km
TKY	6	810000	1	Antakya			6.5		65
TKY	7	831030	713	Eruzurm-Kars	Horasan	Soft	6.5	10	20
TKY	8	831030	713	Eruzurm-Kars	Horasan	Soft	6.5	10	20
TKY	9	840329	306		Balikesir		4.4	10	10
TKY	10	840329	306		Balikesir		4.4	10	10
WAS	1	490413	1955	Western Wash.	Olympia Hwy Test Lab	Soft	7.9	70	17—
WAS	2	490413	1955	Western Wash.	Olympia Hwy Test Lab	Soft	7.9	70	17
WAS	3	490413	1955	Western Wash.	Seattle Army Base	Soft	7.9	70	62
WAS	4	490413	1955	Western Wash.	Seattle Army Base	Soft	7.9	70	62
WAS	5	650429	1528	Puget Sound	Olympia Hwy Test Lab	Soft	6.5	59	50
WAS	6	650429	1528	Puget Sound	Olympia Hwy Test Lab	Soft	6.5	59	50
YUG	1	760911	1631		Breginj Needle Fcty	Soft	5.2	17	
YUG	2	760915	315		Breginj Needle Fcty	Soft	6.1	16	
YUG	3	760915	315		Breginj Needle Fcty	Soft	6.1	16	
YUG	4	760915	921		Breginj Needle Fcty	Soft	5.4		
YUG	5	790415	722		Town Assy Bldg Bar	Soft	7.2	30	
YUG	6	790415	722		Town Assy Bldg Bar	Soft	7.2	30	
YUG	7	790415	722		Olimpic Hotl Ulcinj	Soft	7.2	30	
YUG	8	790415	722		Olimpic Hotl Ulcinj	Soft	7.2	30	
YUG	9	790415	722		Ulcini-2	Hard	7.2	30	
YUG	10	790415	722		Olive Hotel Petrovac	Soft	7 2	30	
YUG	11	790405	722		Olive Hotel Petrovac	Soft	7.2	30	
YUG	12	790415	722		Hercegnovi	Hard	7 2	30	
YUG	13	790415	722		Hercegnovi	Hard	7 2	30	

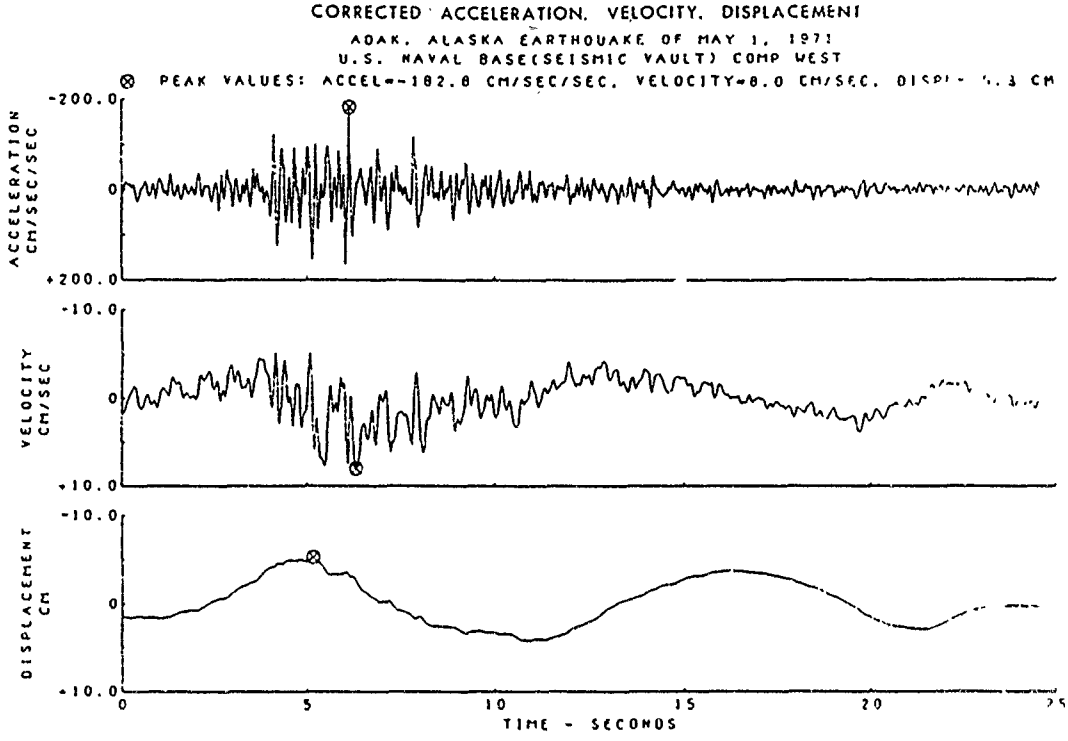
, or of exceptional interest)

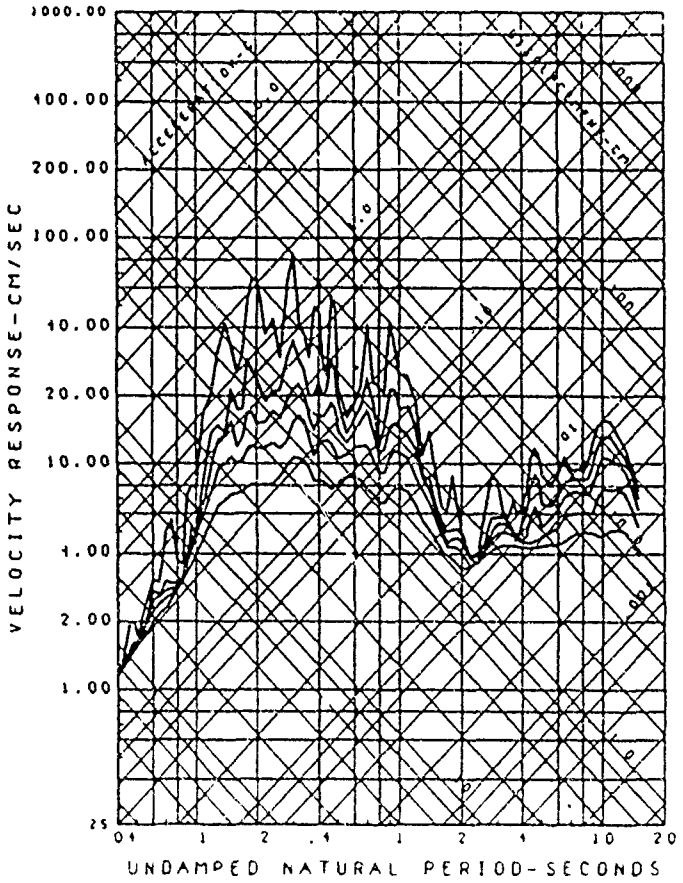
David J. Leeds
DJLA 90-21-14

ATION	SITE CHAR	MAG Mb	DEP km	EPI km	HYP km	TR deg	HR ge	HOR VEL	HOR DISP	DURATION g5%	DURATION g10%	INTENSITY EPI	INTENSITY STA	EPICENTER LAT	EPICENTER LONG
		6.5		65	66		176								
	Soft	6.5	10	20	22		148	22.66	15.46	15.8	5.7		VI		
	Soft	6.5	10	20	22		135	36.63	24.69	12.7	5.4		VI		
		4.4	10	10	14		219	8.9	1.36	0.9	0.6		VI		
		4.4	10	10	14		136			1.4	0.1		VI		
/ Test Lab	Soft	7.9	70	17	72	266	275	17.0	10.4	21.5	18.0	VIII	VIII	47.17	122.6
/ Test Lab	Soft	7.9	70	17	72	176	162	21.4	8.5	22.0	18.0	VIII	VIII	47.17	122.6
/ Base	Soft	7.9	70	62	94	182	67	8.2	2.4	16.0	0.0	VIII	VIII	47.17	122.6
Base	Soft	7.9	70	62	94	272	66	7.9	2.7	13.0	0.0	VIII	VIII	47.17	122.6
/ Test Lab	Soft	6.5	59	50	77	266	194	12.7	3.8	14.0	4.8	VIII	VII	47.41	122.2
/ Test Lab	Soft	6.5	59	50	77	176	134	8.0	3.8	12.4	3.6	VIII	VII	47.41	122.2
e Fcty	Soft	5.2	17				170						VI		
e Fcty	Soft	6.1	16				520						X		
e Fcty	Soft	6 1	16				490						X		
e Fcty	Soft	5.4					420						IX		
ildg Bar	Soft	7.2	30				356						IX		
ildg Bar	Soft	7.2	30				353						IX		
Ulcinj	Soft	7.2	30				279						VIII		
Ulcinj	Soft	7.2	30				235						VIII		
	Hard	7.2	30				218						VI		
etrovac	Soft	7.2	30				441						IX		
etrovac	Soft	7.2	30				298						IX		
	Hard	7.2	30				226						VI		
	Hard	7.2	30				209						VI		

N	INTENSITY		EPICENTER		STA NO.	RECORD NO.	INSTR	STA LOCATION		COPY	REFERENCES
0%	EPI	STA	LAT	LONG				LAT	LONG		
											IS-IISSEE 20, 1984
5.7		VI					SMA-1			VS	IS-IISSEE 20, 1984
5.4		VI					SMA-1			VS	IS-IISSEE 20, 1984
0.6		VI					SMA-1			VS	Ergunay et al 1985
0.1		VI					SMA-1			VS	Ergunay et al 1985
8.0	VIII	VIII	47.17	122.62	2101	CIT B029	CGS	47.03	122.90	yes	CIT EERL
8.0	VIII	VIII	47.17	122.62	2101	CIT B029	CGS	47.03	122.90	yes	CIT EERL
0.0	VIII	VIII	47.17	122.62	2106	CIT B028	CGS	47.55	122.34	yes	CIT EERL
0.0	VIII	VIII	47.17	122.62	2106	CIT B028	CGS	47.55	122.34	yes	CIT EERL
1.8	VIII	VII	47.41	122.29	2101	CIT B032	CGS	47.03	122.90	yes	USGS OF 75-375
1.6	VIII	VII	47.41	122.29	2101	CIT B032	CGS	47.03	122.90	yes	USGS OF 75-375
		VI									
		X									
		X									
		IX									
		IX									
		IX									
		VIII									
		VIII									
		VI									
		IX									
		IX									
		VI									
		VI									

APPENDIX B: CATALOGUE OF RECOMMENDED ACCELEROGRAM RECORDS WITH RESPONSE SPECTRA



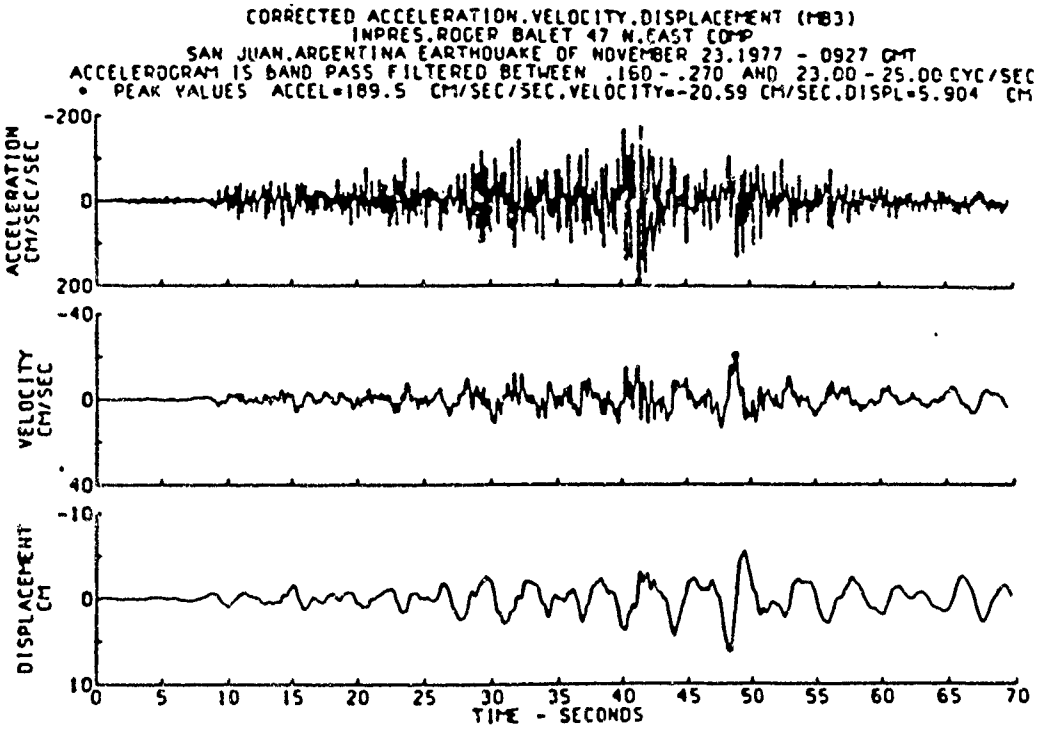


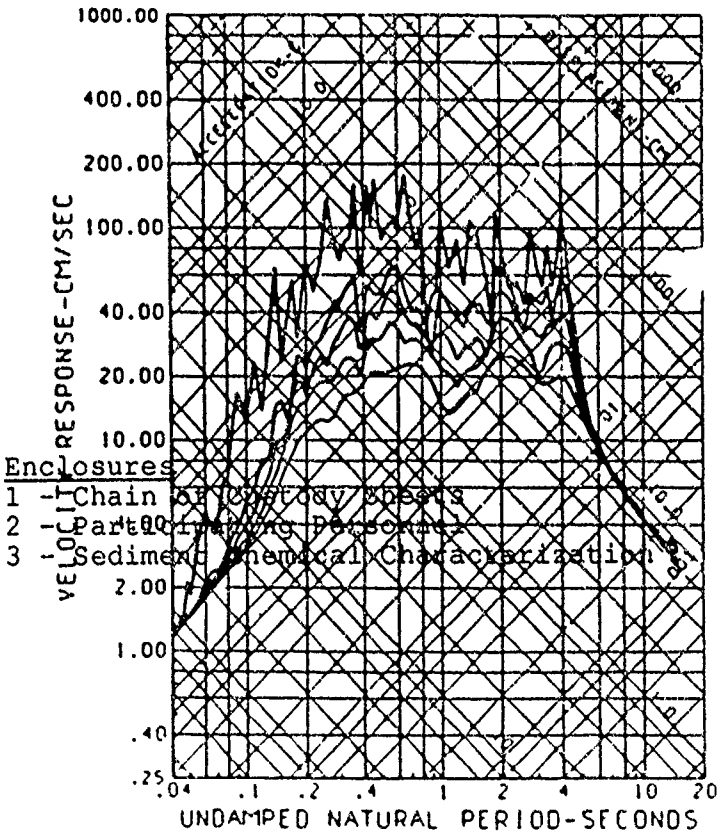
USGS OF 76-609

SEISMIC ENGINEERING
BRANCH/USGS
ADAK, ALASKA
US NAVAL BASE
CRITICAL DAMPING
0, 2, 5, 10, 20 PERCENT

5/1/71, WEST

AKA 1





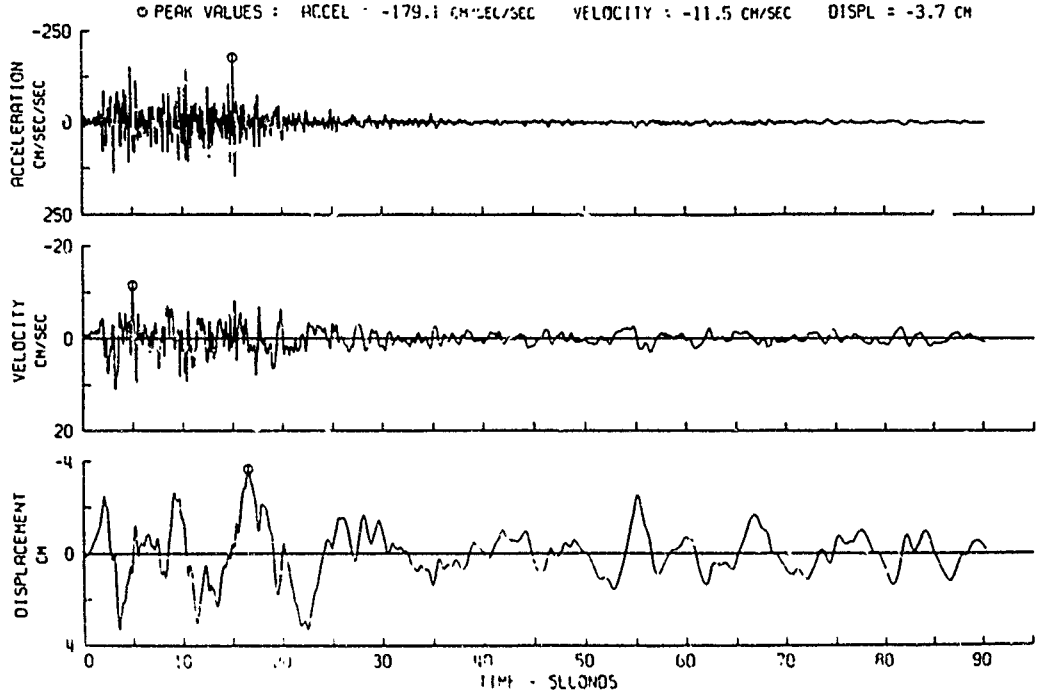
Enclosures
1 - Chain of Custody Sheets
2 - Particle Sizing Processing
3 - Sediment Chemical Characterization

ROJAHN ET AL 1980

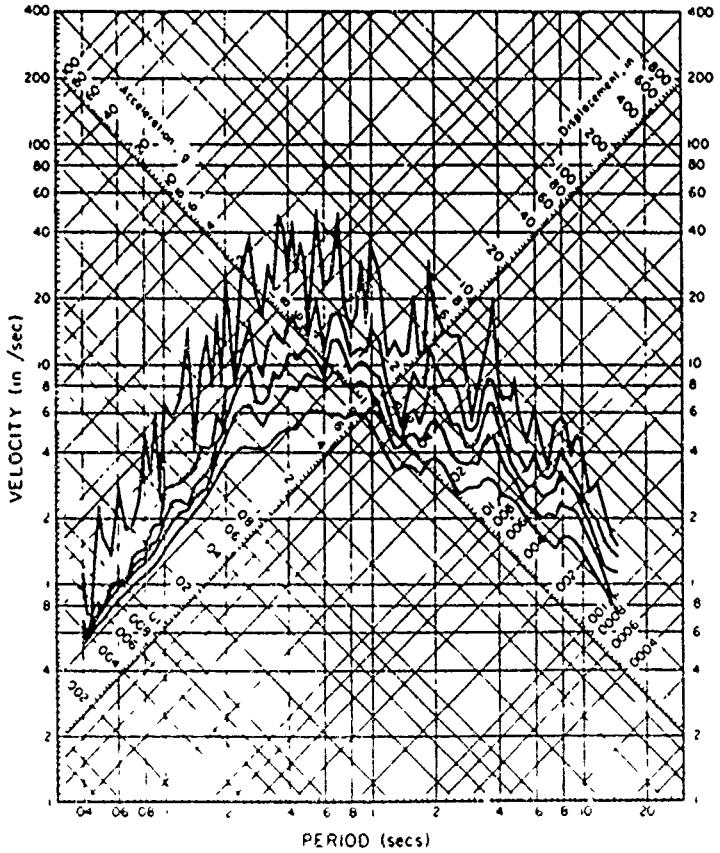
SEISMIC ENGINEERING
BRANCH/USGS
BAND PASSED FROM
.160 - .270 TO 23.00 -25.00 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

SAN JUAN.ARGENTINA.INPRES.
11/23/77.EAST

ARG 1



CIT EERL 72-50



CIT EERL 73-80

IIIB024 34.002.0 EL CENTRO IMPERIAL VALLEY

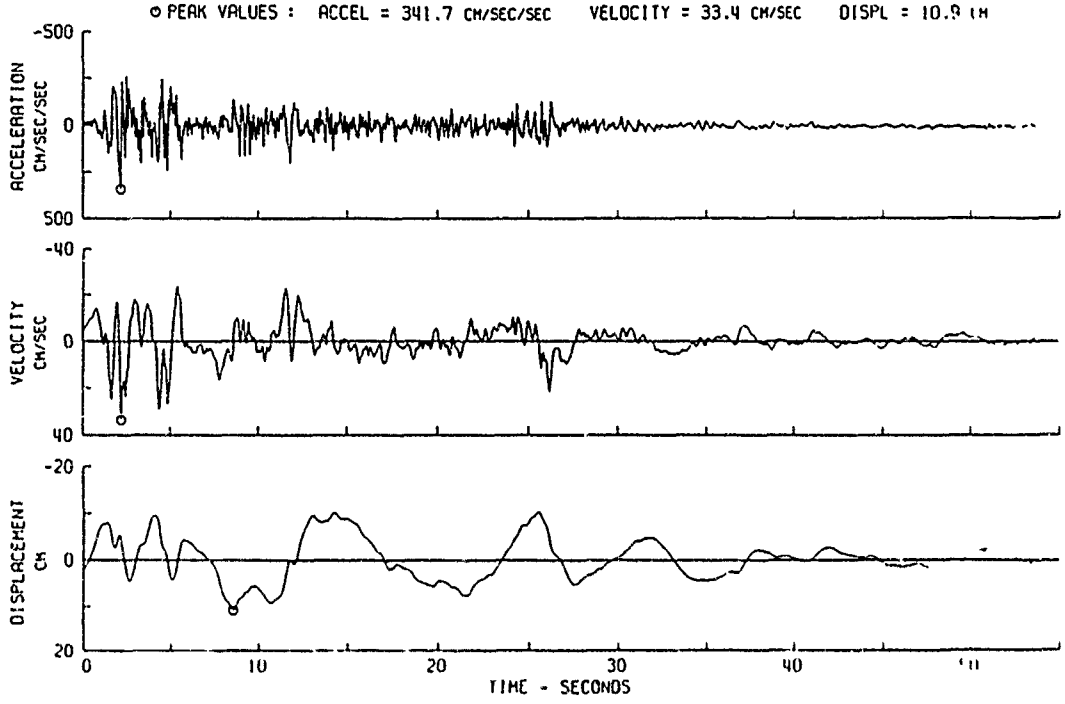
COMP N90E

DAMPING VALUES ARE

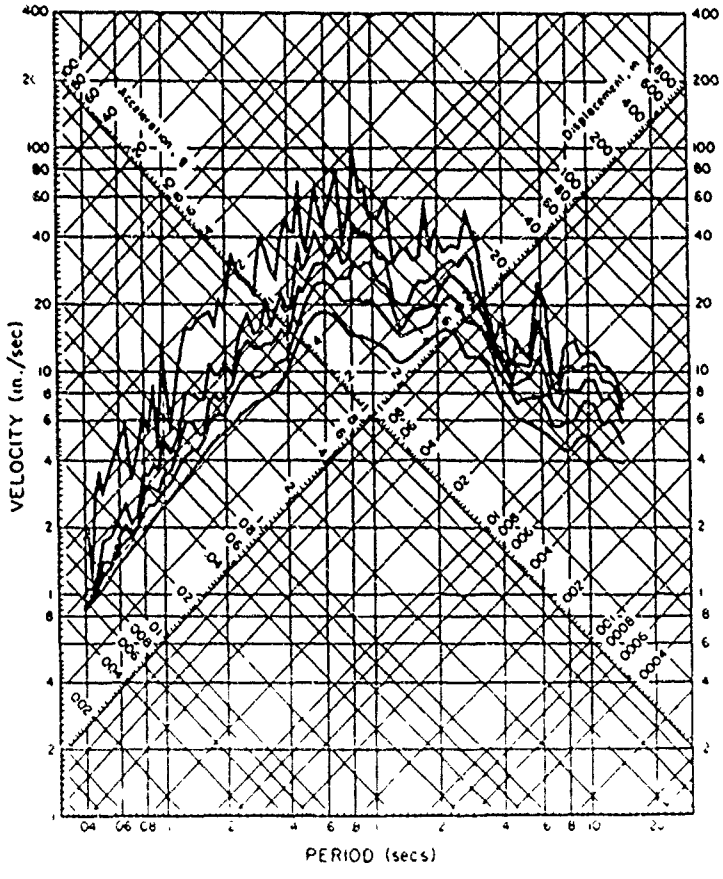
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

LOWER CALIFORNIA EARTHQUAKE
DEC 30, 1934 - 0552 PST

CAL 2



CIT EERL 71-50

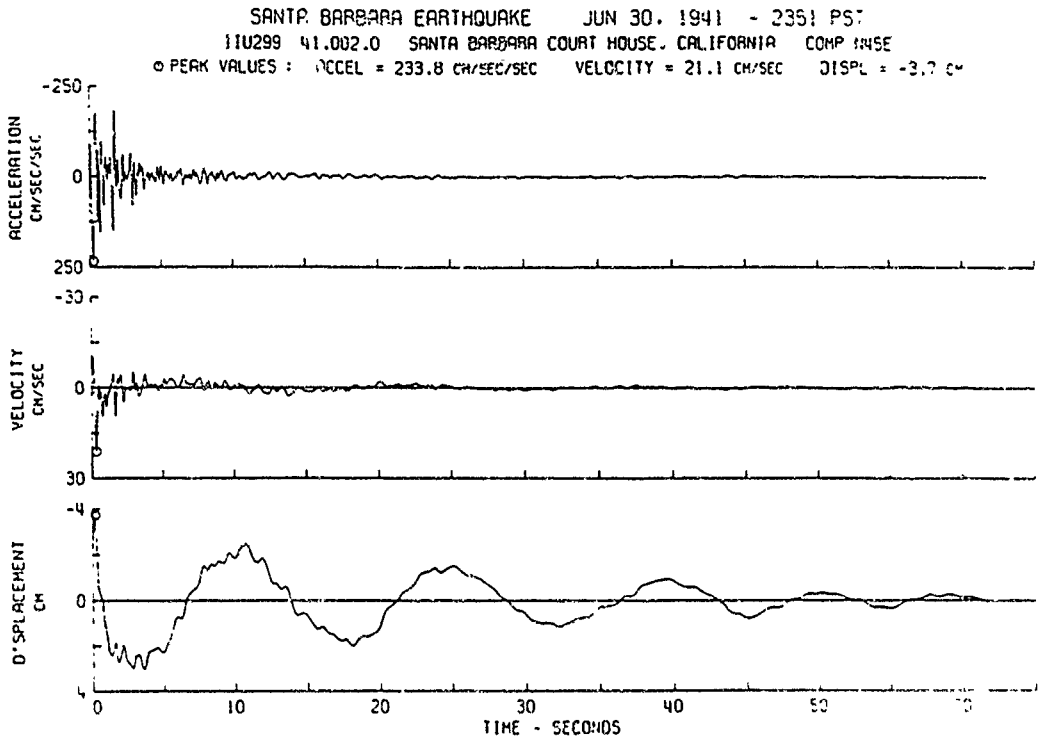


CIT EERL 72-80

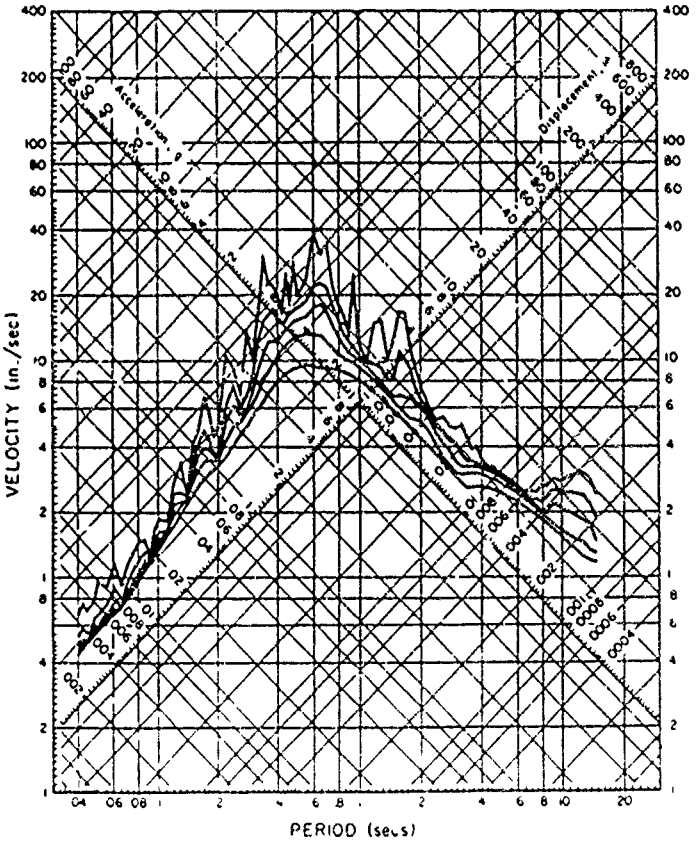
IIIA001 40.001.0 EL CENTRO SITE
IMPERIAL VALLEY IRRIGATION DISTRICT
COMP S00E
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

IMPERIAL VALLEY EARTHQUAKE
MAY 18, 1940 - 2037 PST

CAL 3



CIT EERL 75-51



CIT EERL 75-81

SANTA BARBARA COURT HOUSE, CALIFORNIA
IIIU299 41.002.0 COMP S45E
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

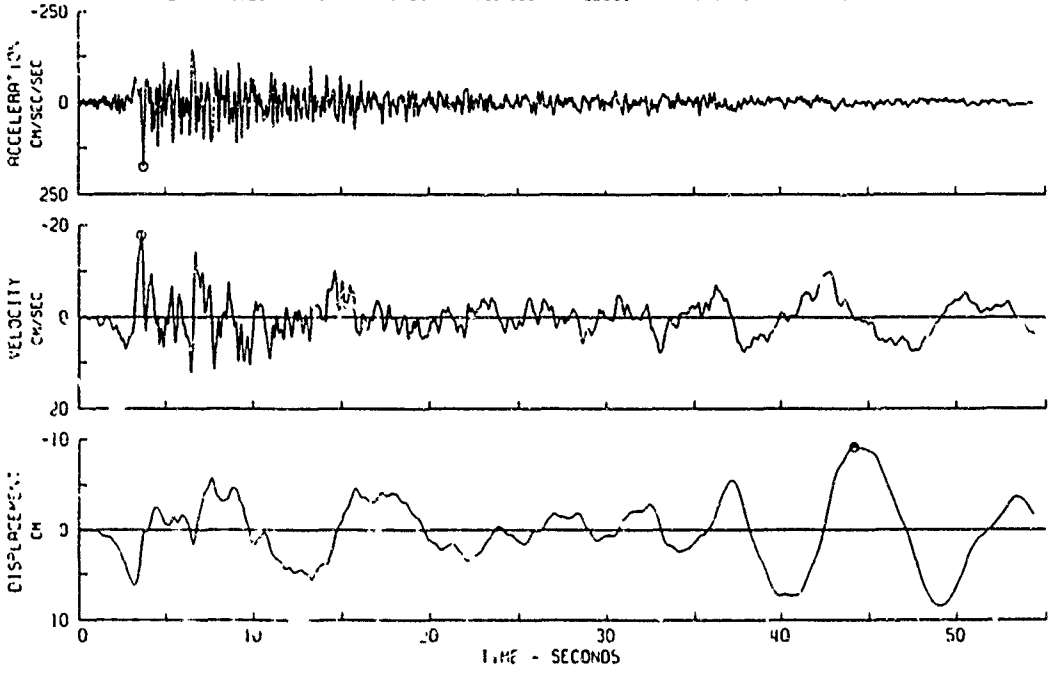
SANTA BARBARA EARTHQUAKE
JUN 30, 1941 - 2351 PST

CAL 5

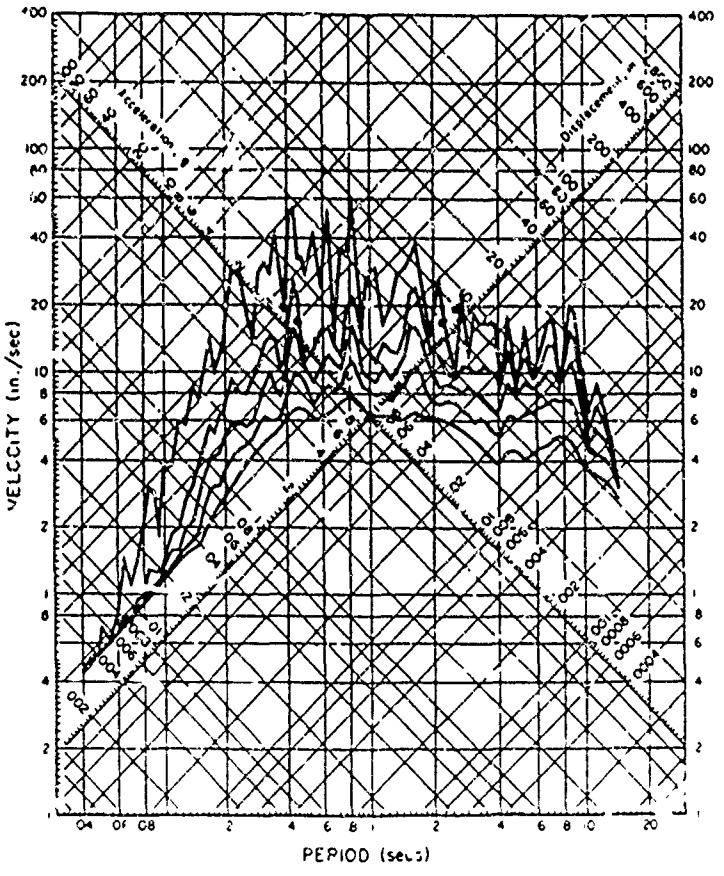
KERN COUNTY, CALIFORNIA EARTHQUAKE JULY 21, 1952 - 0453 PDT

111A004 52.002.0 TAFT LINCOLN SCHOOL TUNNEL COMP S69E

⊙ PEAK VALUES : ACCEL = 175.9 CM/SEC/SEC VELOCITY = -17.7 CM/SEC DISPL = -9.2 CM



CIT EERL 71-50



CIT EERL 72-80

TAFT LINCOLN SCHOOL TUNNEL

111A004 52.002.0 COMP S69E

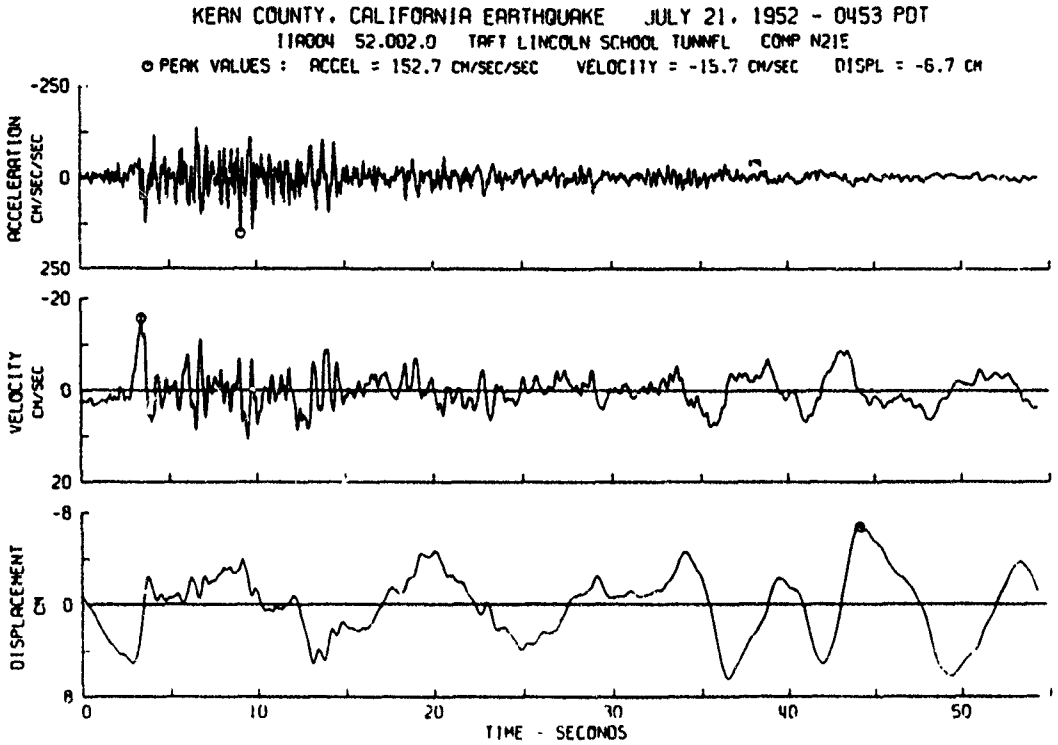
DAMPING VALUES ARE

0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

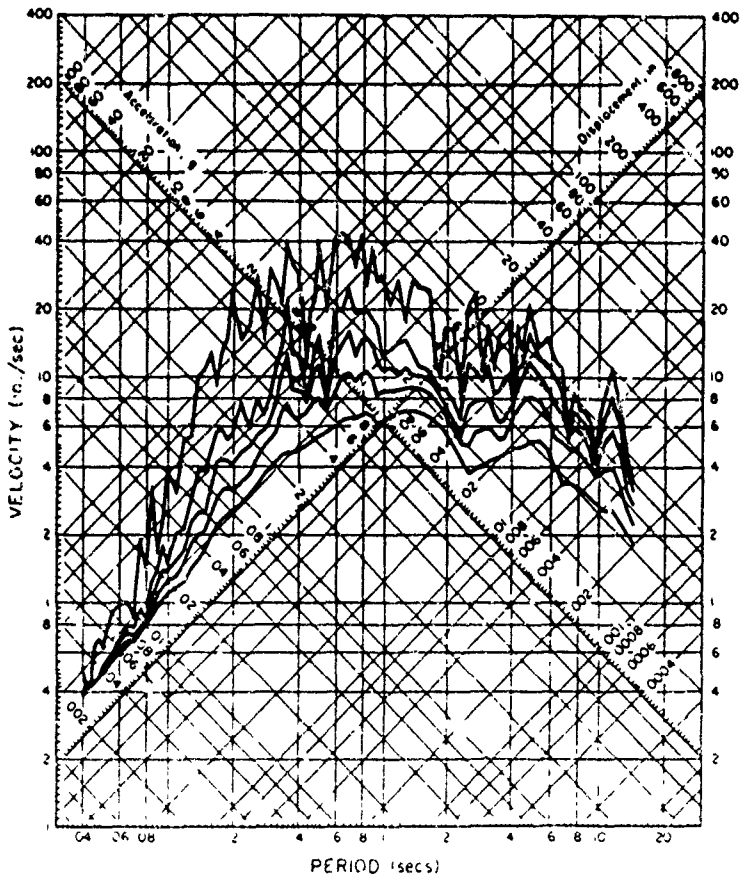
KERN COUNTY, CALIFORNIA EARTHQUAKE

JULY 21, 1952 - 0453 PDT

CAL 6



CIT EERL 71-50

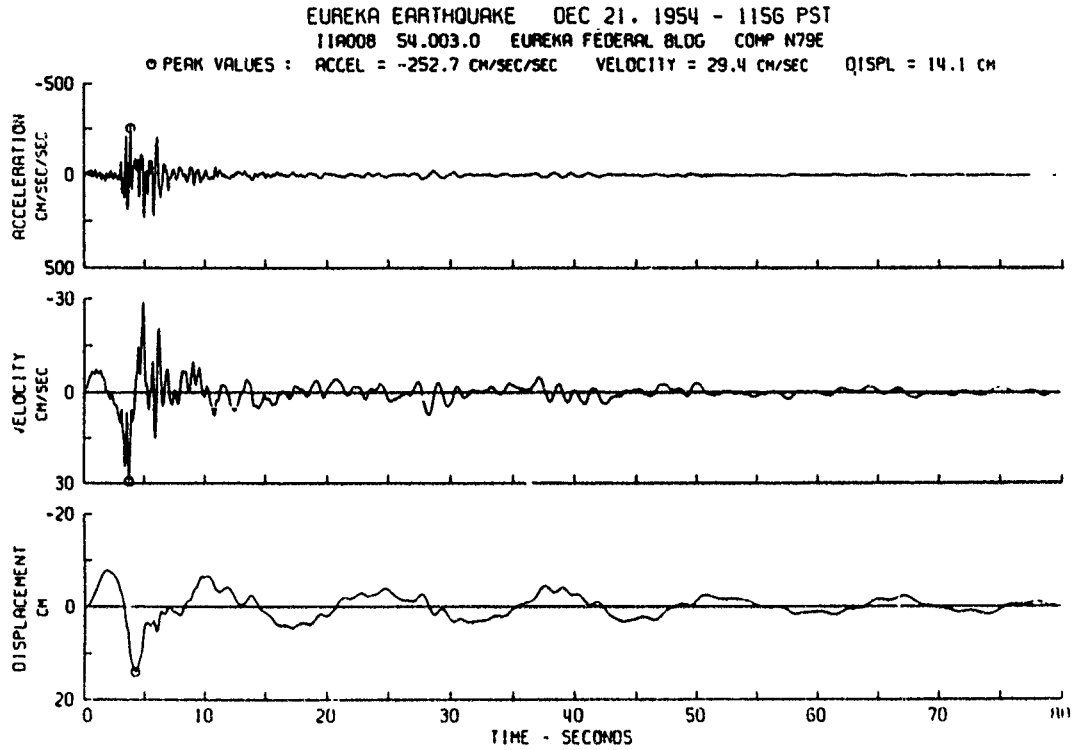


CIT EERL 72-80

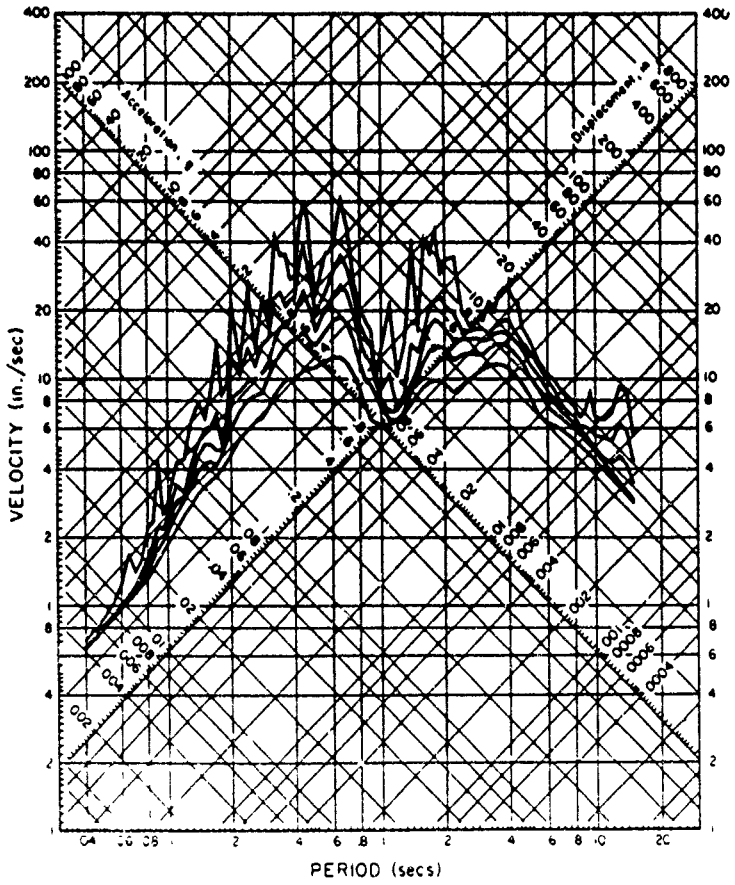
TAFT LINCOLN SCHOOL TUNNEL
IIIA004 52.002.0 COMP N21E
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

KERN COUNTY, CALIFORNIA EARTHQUAKE
JULY 21, 1952 - 0453 PDT

CAL 7



CIT EERL 71-50

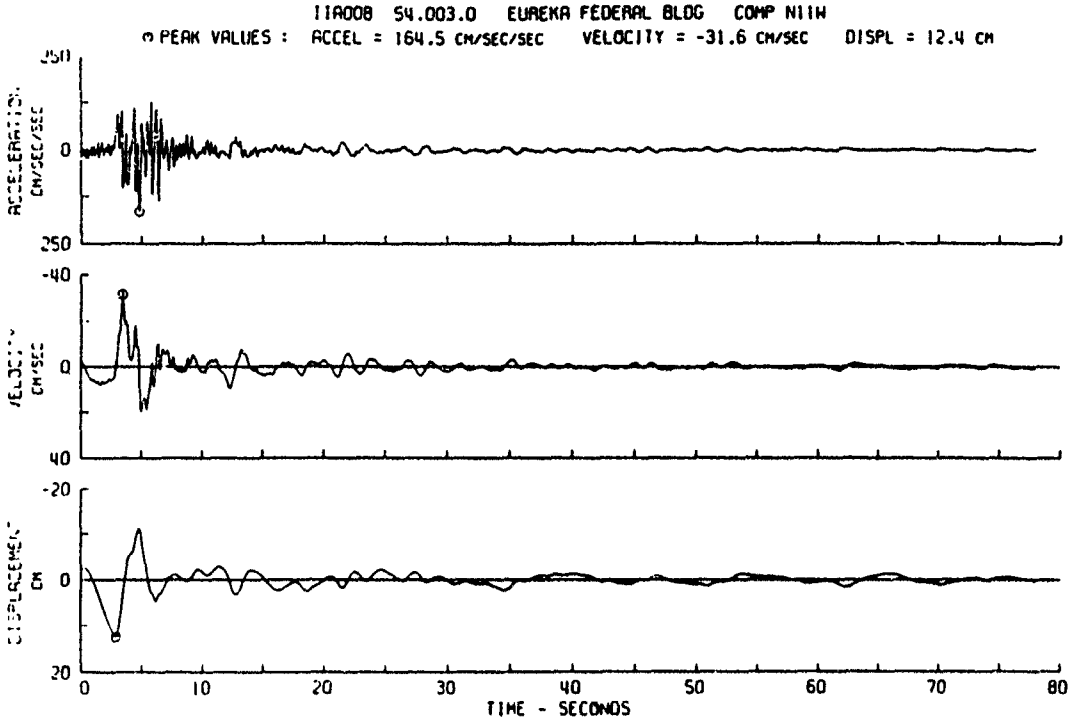


CIT EERL 72-80

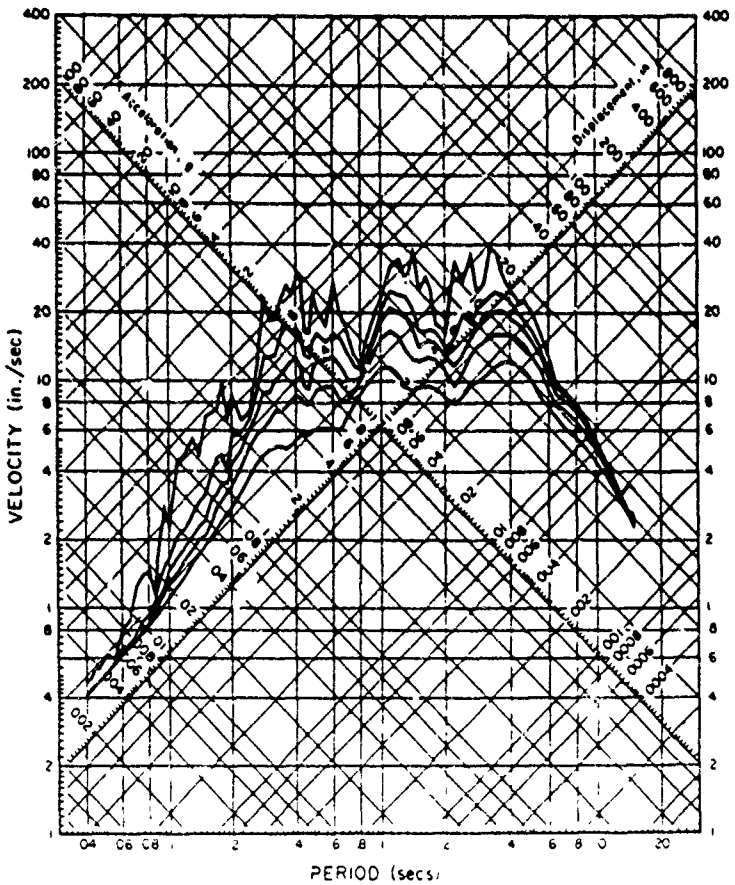
EUREKA FEDERAL BLDG
IIIA008 54.003.0 COMP N79E
DAMPING VALUES ARE
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EUREKA EARTHQUAKE
DEC 21, 1954 - 1156 PST

CAL 8



CIT EERL 71-50

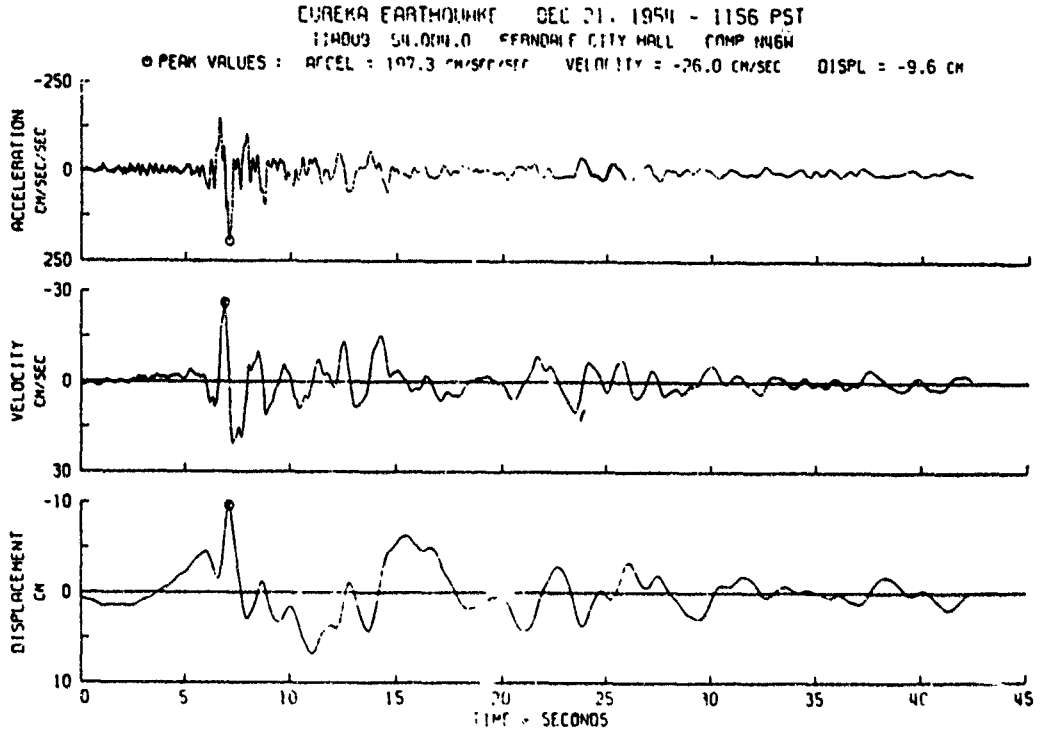


CIT EERL 72-80

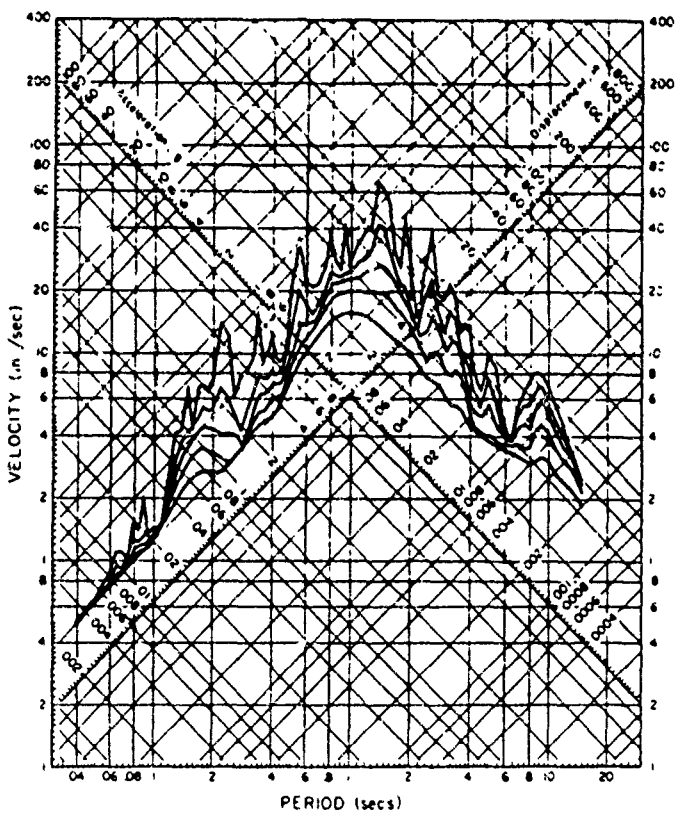
EUREKA FEDERAL BLDG
1118008 54.003.0 COMP N11W
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EUREKA EARTHQUAKE
DEC 21, 1954 - 1156 PST

CAL 9



CIT EERL 71-50

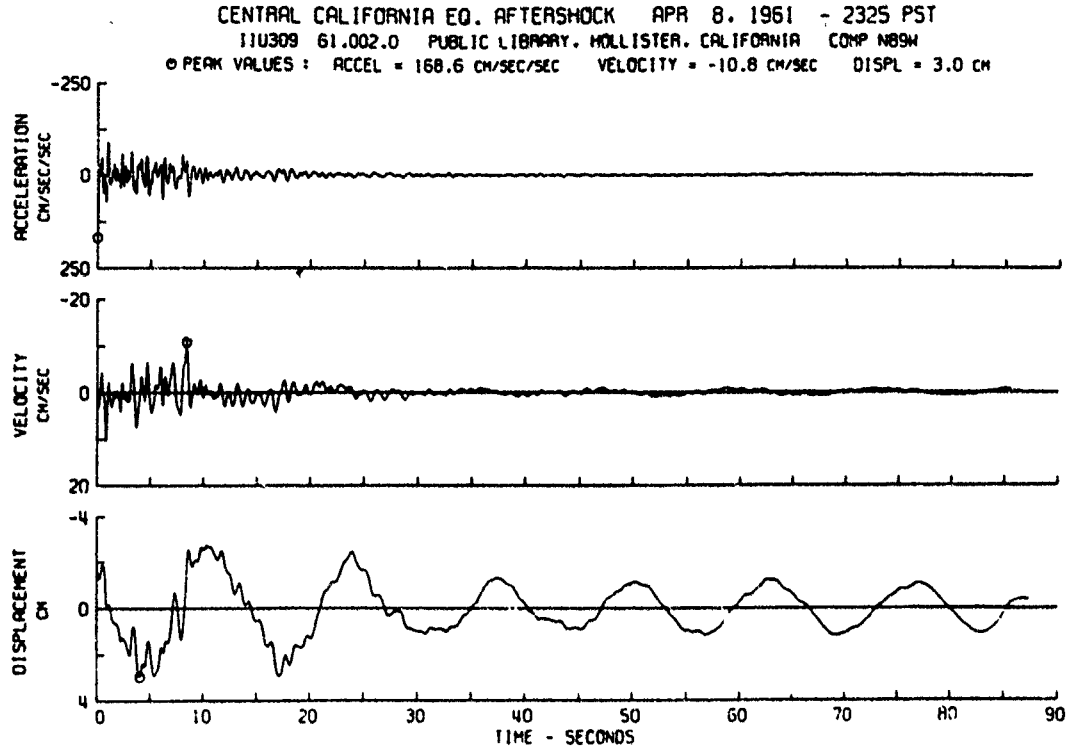


CIT EERL 72-80

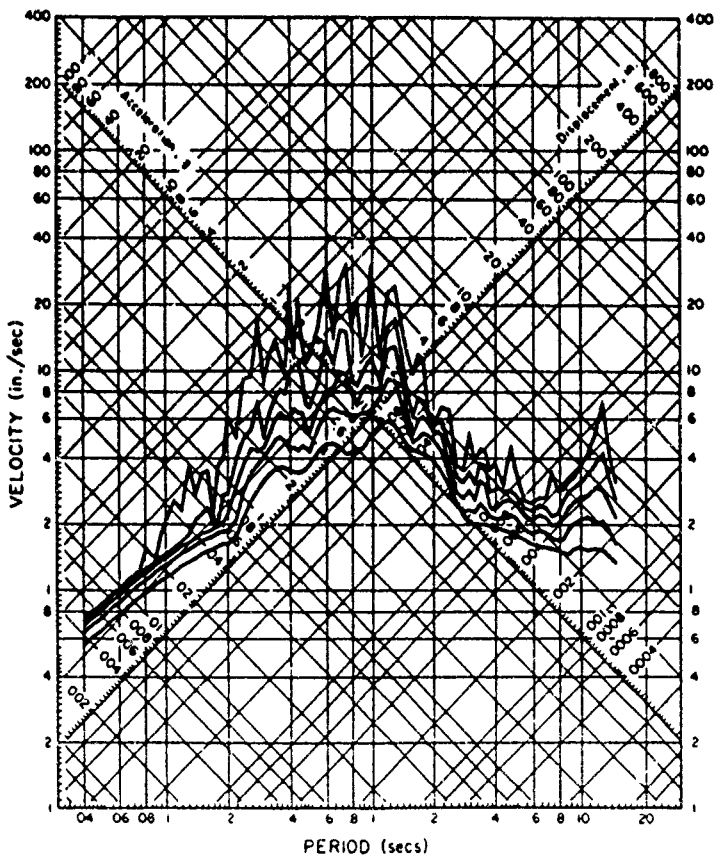
FERNDALE CITY HALL
111A009 54.004.0
COMP N46W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

EUREKA EARTHQUAKE
DEC 21, 1954 - 1156 PST

CAL 10



CIT EERL 75-51

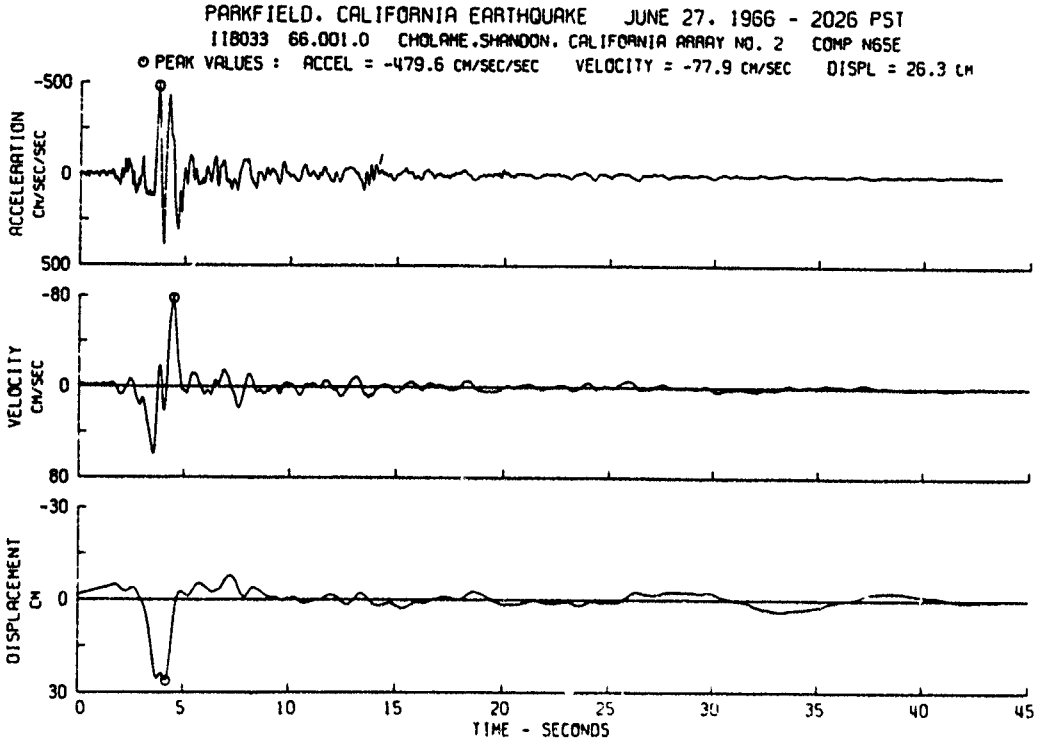


CIT EERL 75-81

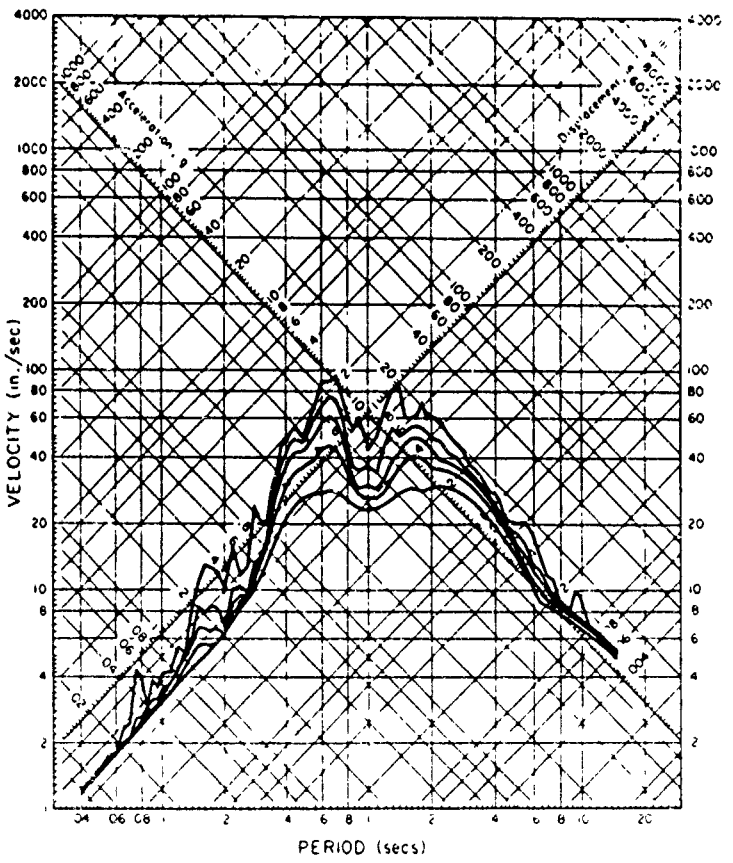
PUBLIC LIBRARY. HOLLISTER. CALIFORNIA
IIIU309 61.002.0 COMP N89W
DAMPING VALUES ARE
0. 2. 5. 10 AND 20 PERCENT OF CRITICAL

CENTRAL CALIFORNIA EQ. AFTERSHOCK
APR 8. 1961 - 2325 PST

CAL 12



CIT EERL 72-50

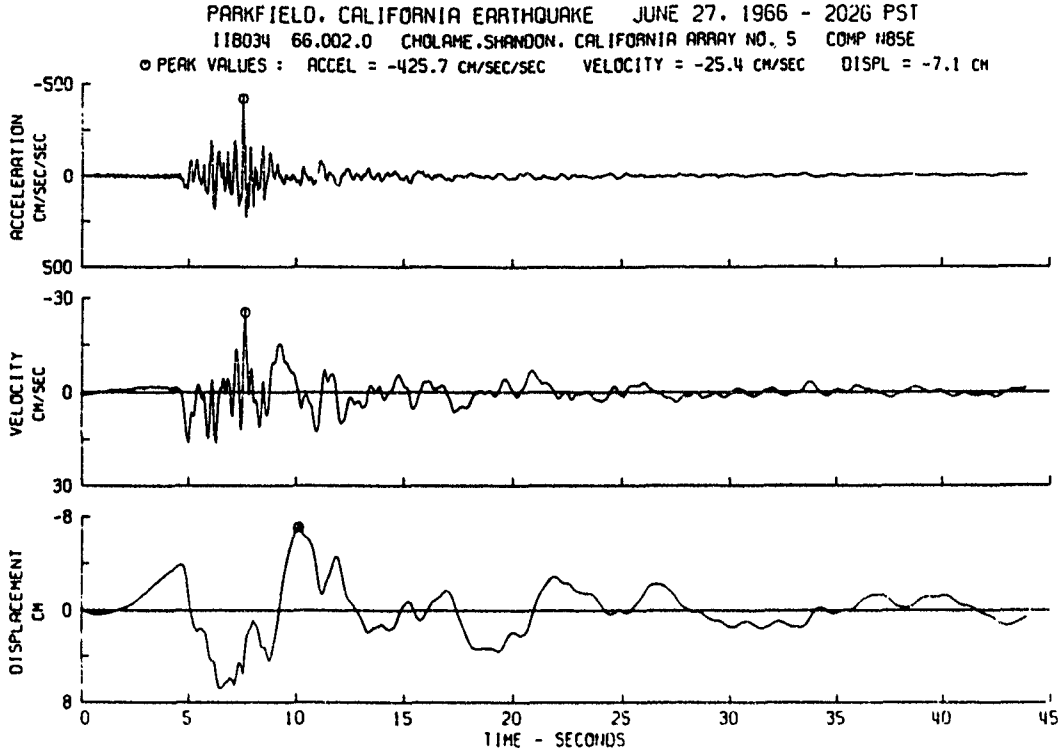


CIT EERL 73-80

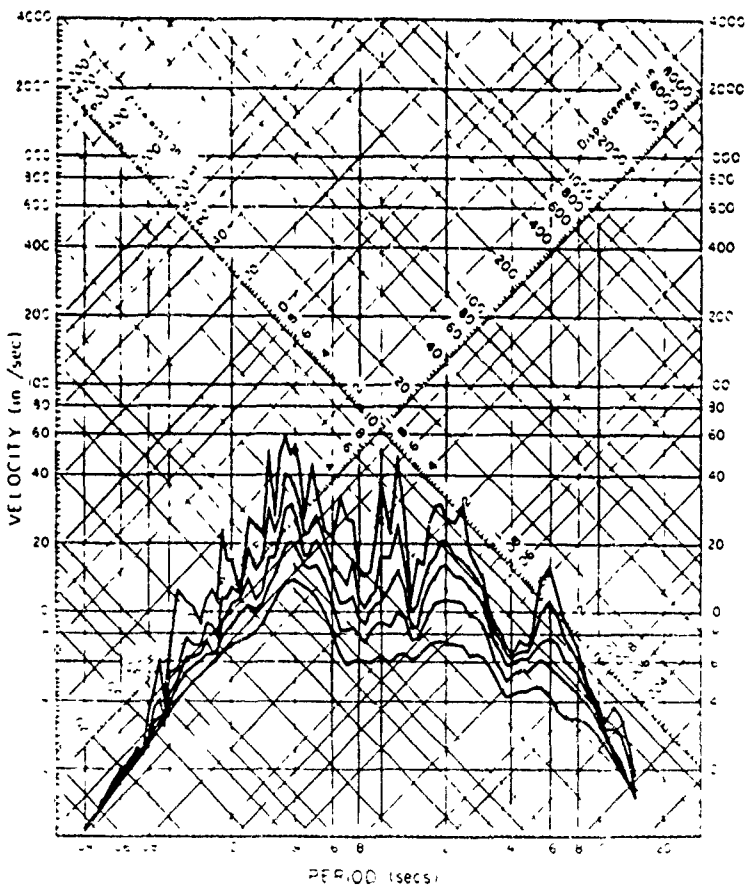
CHOLAME.SHANDON. CALIFORNIA ARRAY NO. 2
IIIB033 66.001.0 COMP N65E
DAMPING VALUES ARE
0. 2. 5. 10 AND 20 PERCENT OF CRITICAL

PARKFIELD. CALIFORNIA EARTHQUAKE
JUNE 27. 1966 - 2026 PST

CAL 13



CIT EERL 72-50

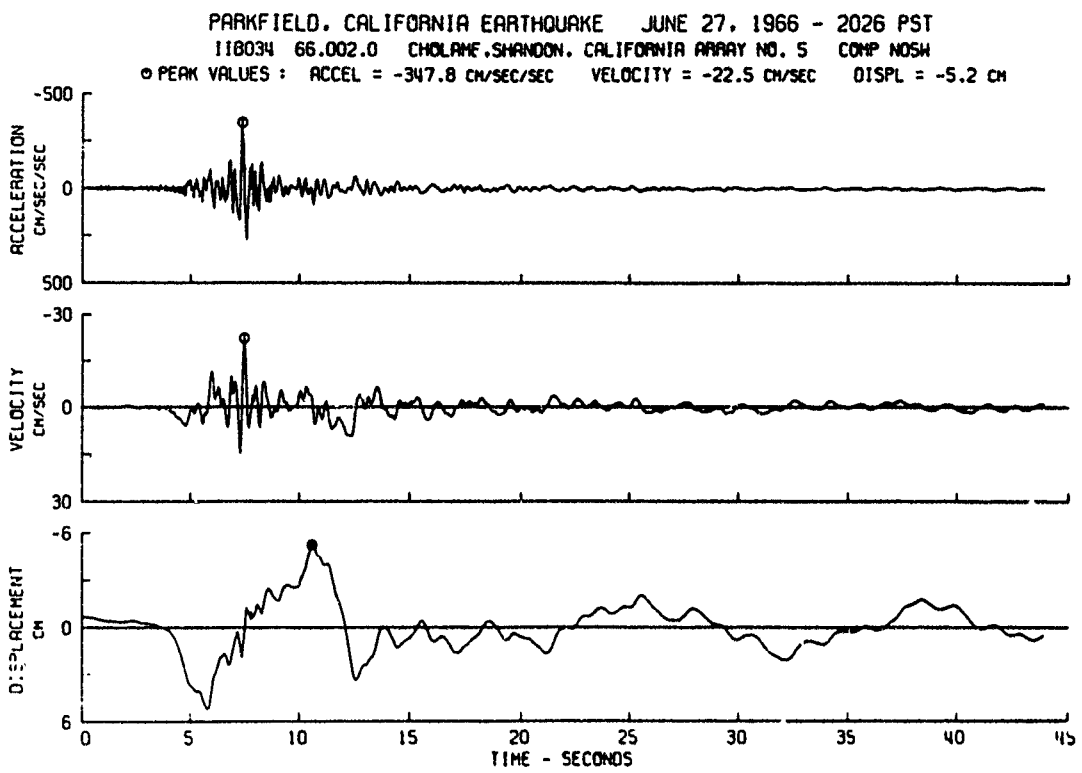


CIT EERL 73-80

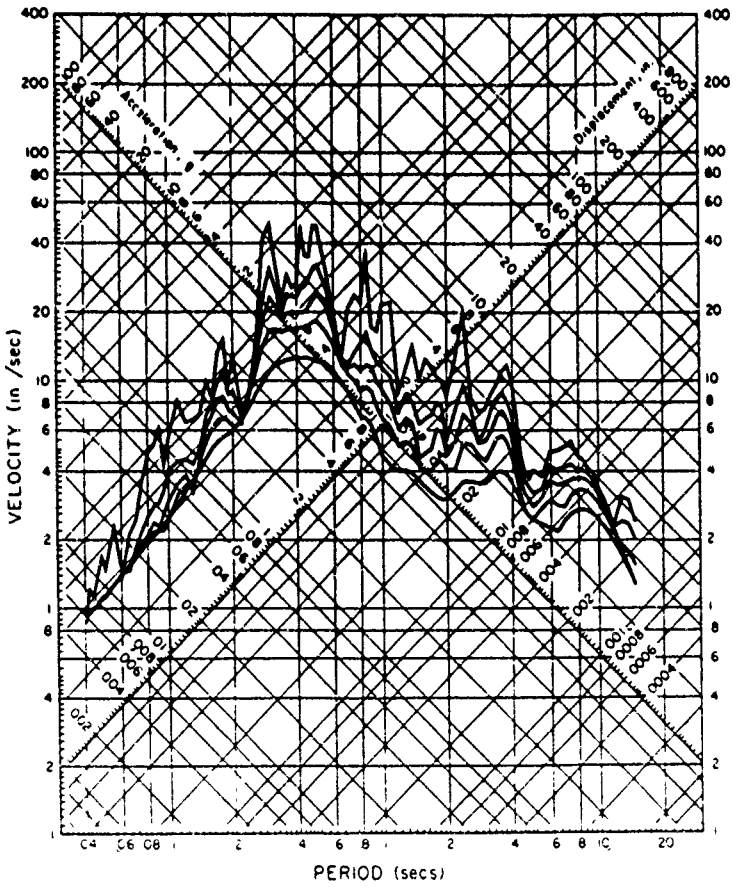
CHOLAME.SHANDON
CALIFORNIA ARRAY NO. 5
1118034 66.002.0 COMP N85E
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

PARKFIELD, CALIFORNIA EARTHQUAKE
JUNE 27, 1966 - 2026 PST

CAL 14



CIT EERL 72-50

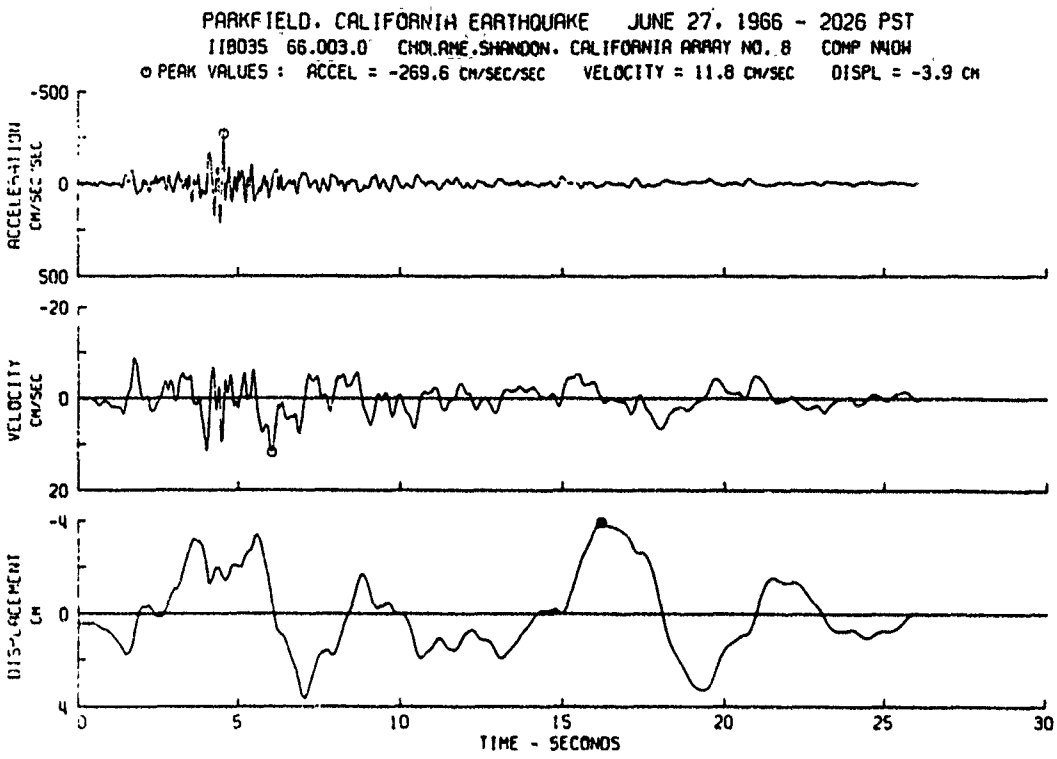


CIT EERL 73-80

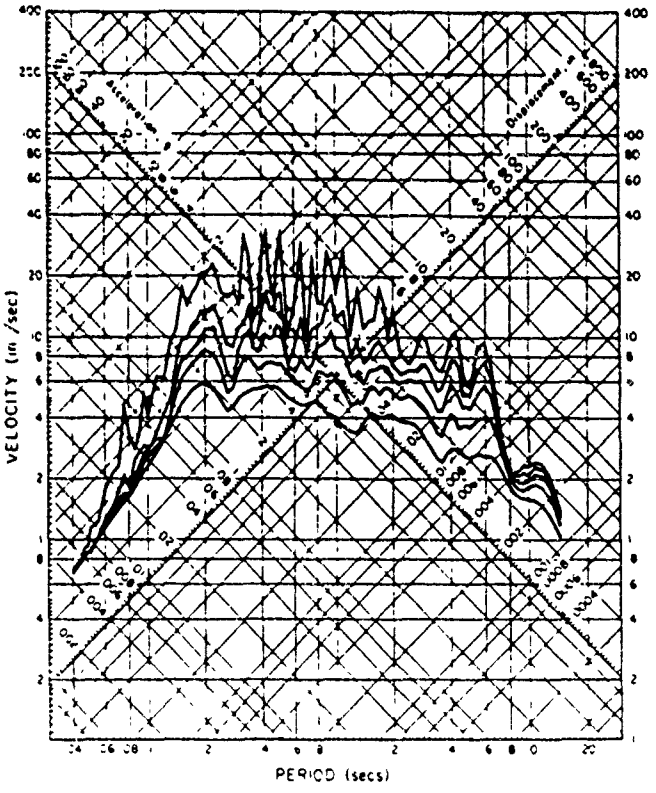
CHOLAME.SHANDON
CALIFORNIA ARRAY NO. 5
1118034 66.002.0 COMP N05W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

PARKFIELD, CALIFORNIA EARTHQUAKE
JUNE 27, 1966 - 2026 PST

CAL 15



CIT EERL 72-50

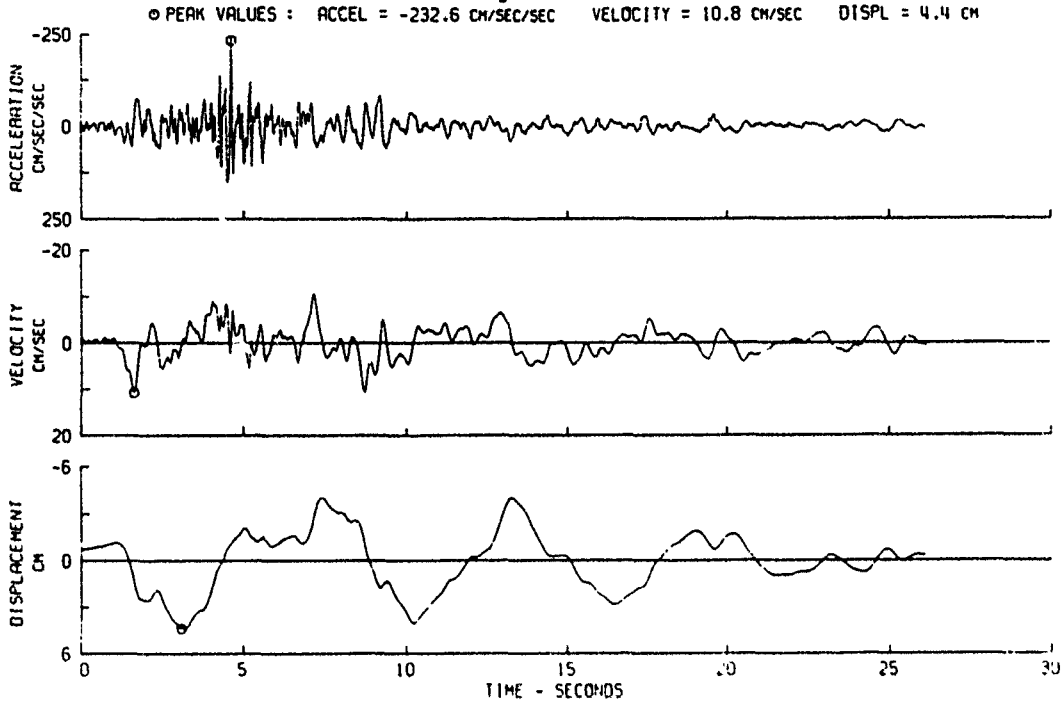


CIT EERL 73-80

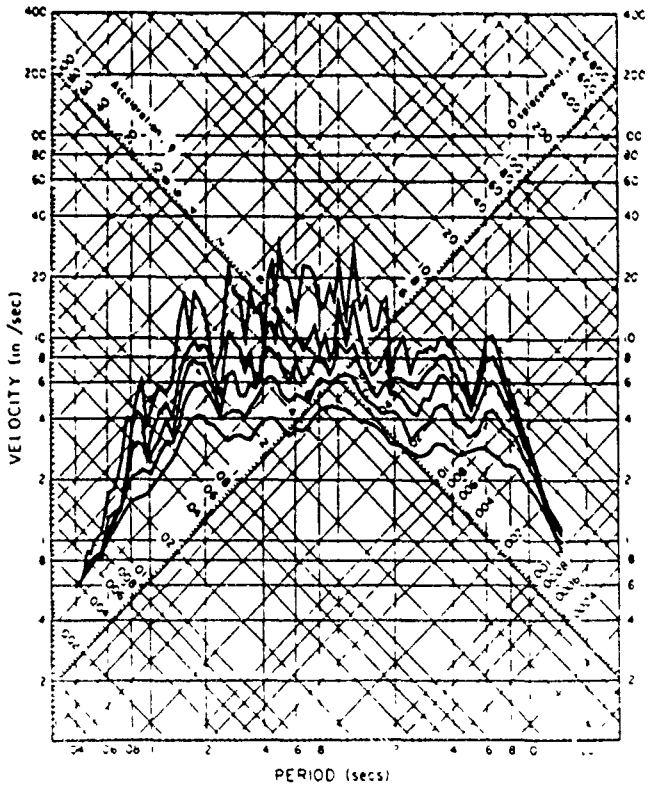
CHOLAME.SHANDON
CALIFORNIA ARRAY NO. 8
1IIB035 66.003.0 COMP N40W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

PARKFIELD, CALIFORNIA EARTHQUAKE
JUNE 27, 1966 - 2026 PST

CAL 16



CIT EERL 72-50



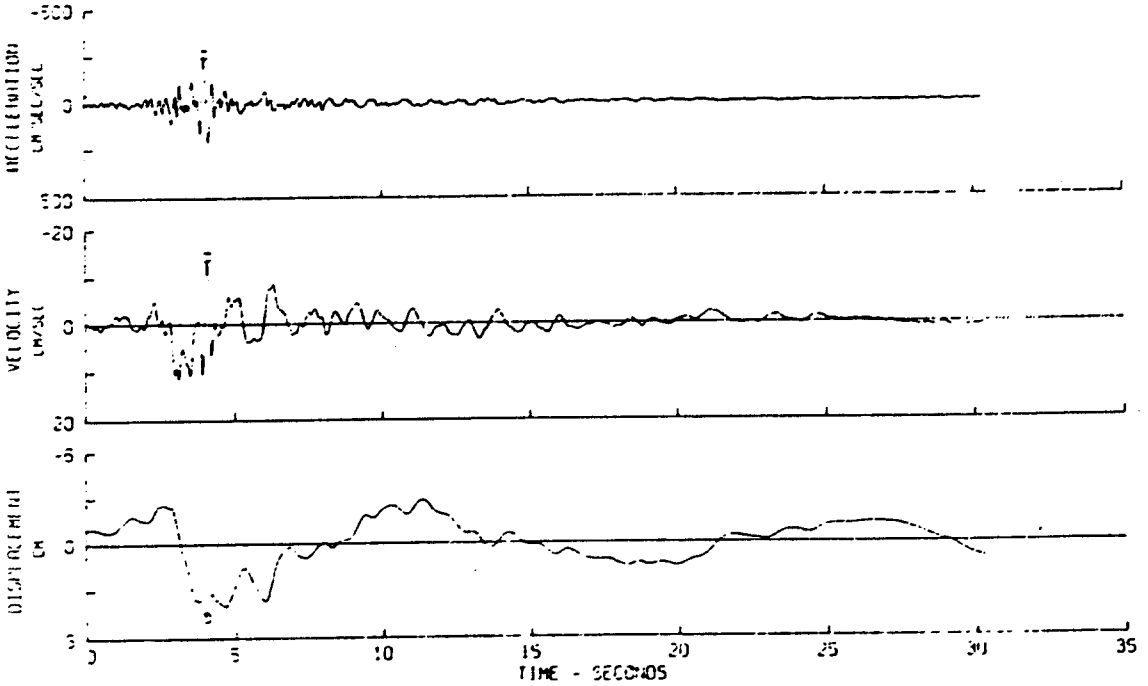
CIT EERL 73-80

CHOLAME.SHANDON
CALIFORNIA ARRAY NO. 8
IIIB035 66.003.0 COMP N50E
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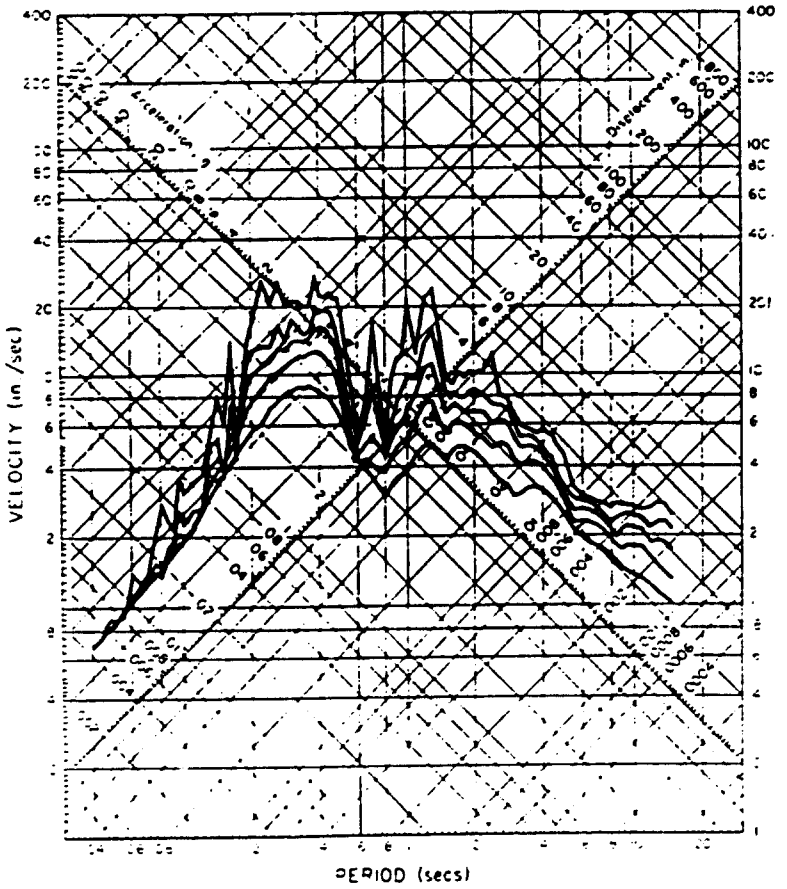
PARKFIELD, CALIFORNIA EARTHQUAKE
JUNE 27, 1966 - 2026 PST

CAL 17

PARKFIELD, CALIFORNIA EARTHQUAKE JUNE 27, 1966 - 2026 PST
1118037 66.005.0 TEMBLOR, CALIFORNIA NO. 2 COMP N65W
PEAK VALUES : ACCEL = -264.3 CM/SEC/SEC VELOCITY = -14.5 CM/SEC DISPL = 4.7 CM



CIT EERL 72-50



CIT EERL 73-80

1118037 66.005.0 TEMBLOR, CALIFORNIA NO. 2

COMP N65W

DAMPING VALUES ARE

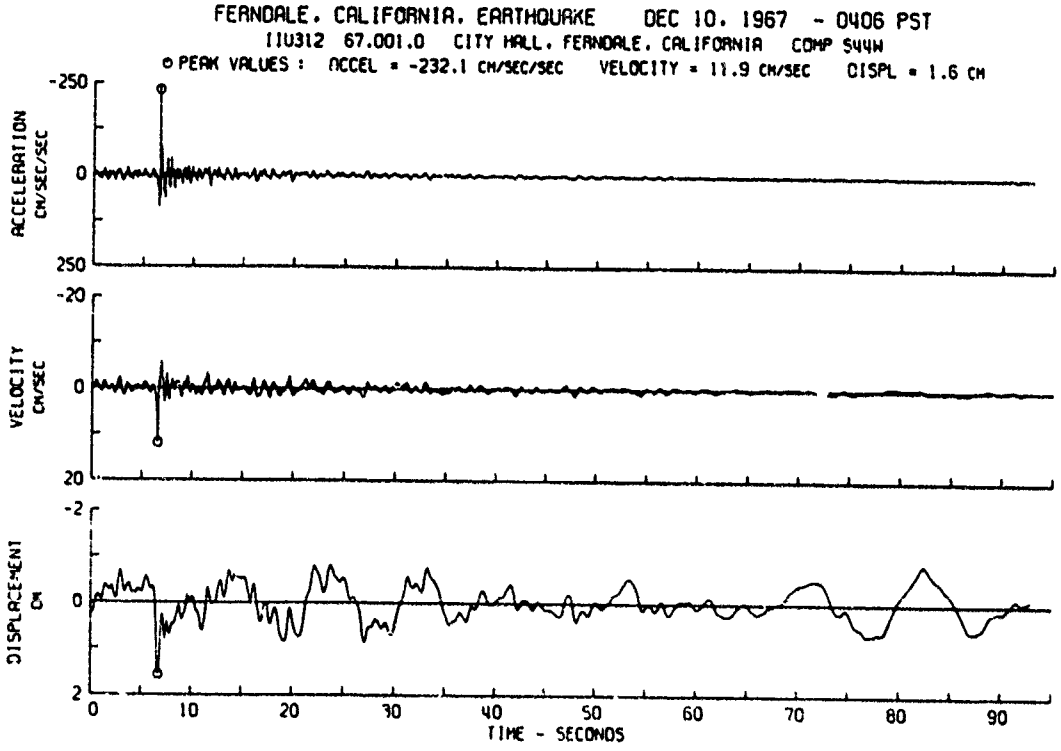
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

PARKFIELD, CALIFORNIA EARTHQUAKE

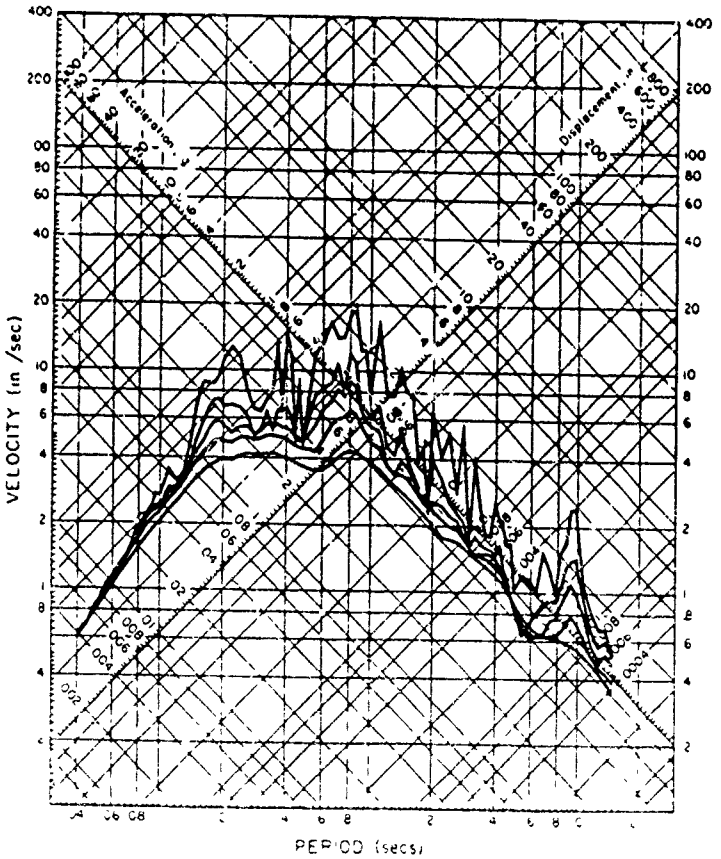
JUNE 27, 1966 - 2026 PST

CAL 19

Best Available Copy



CIT EERL 75-51

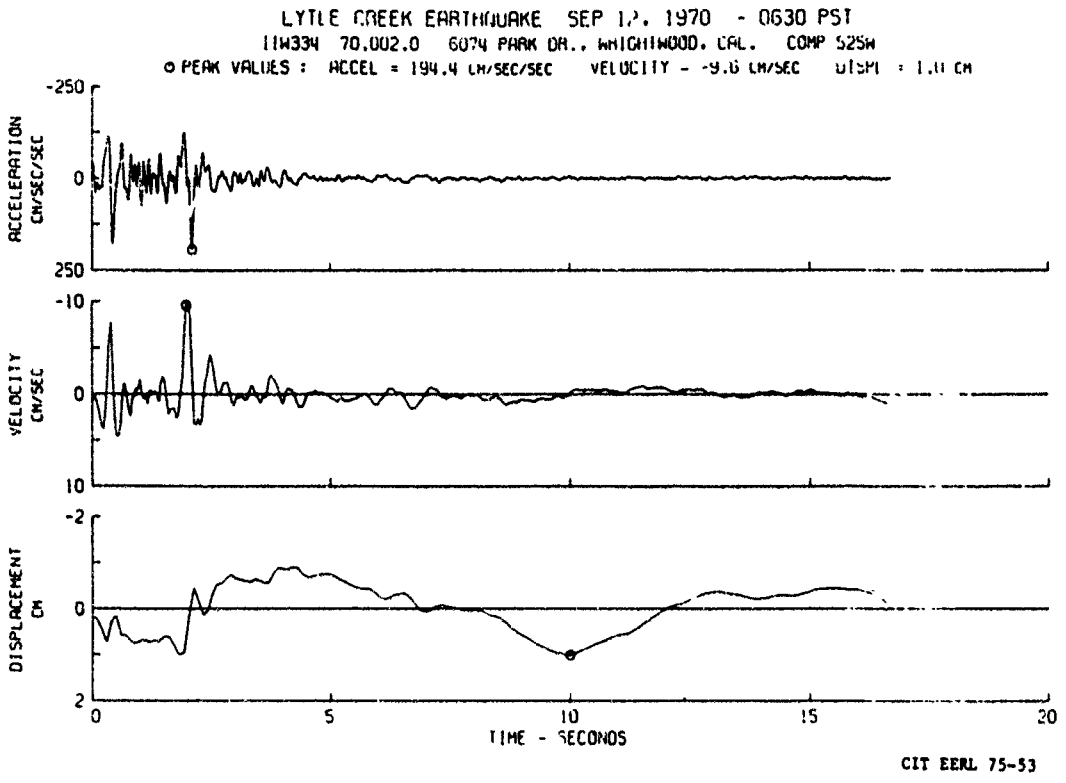


CIT EERL 75-81

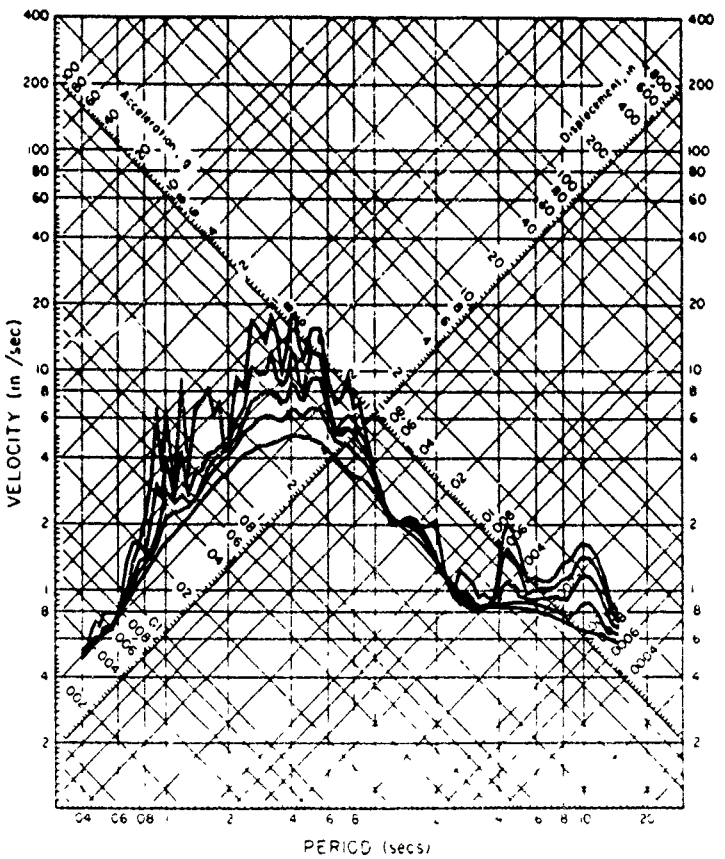
CITY HALL, FERNDALE, CALIFORNIA
I1U312 67.001.0 COMP S44W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

FERNDALE, CALIFORNIA, EARTHQUAKE
DEC 10, 1967 - 0406 PST

CAL 20



CIT EERL 75-53



CIT EERL 75-83

IIW334 70.002.0 6074 PARK DR., WRIGHTWOOD, CAL.

COMP S25W

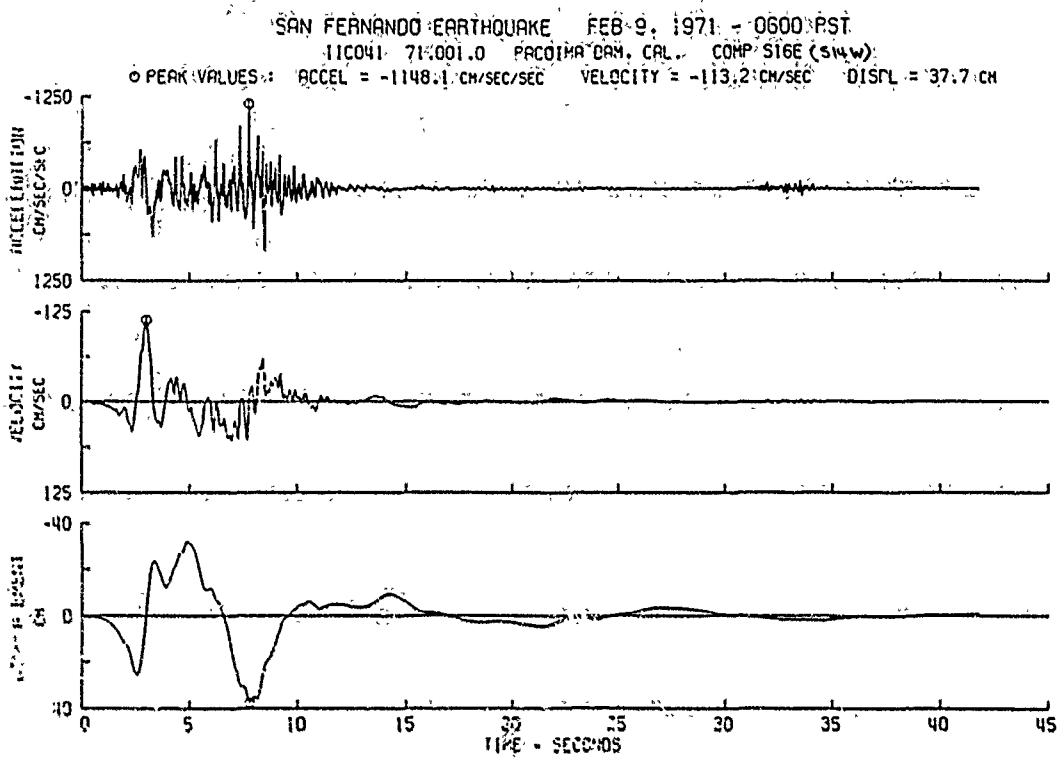
DAMPING VALUES ARE

0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

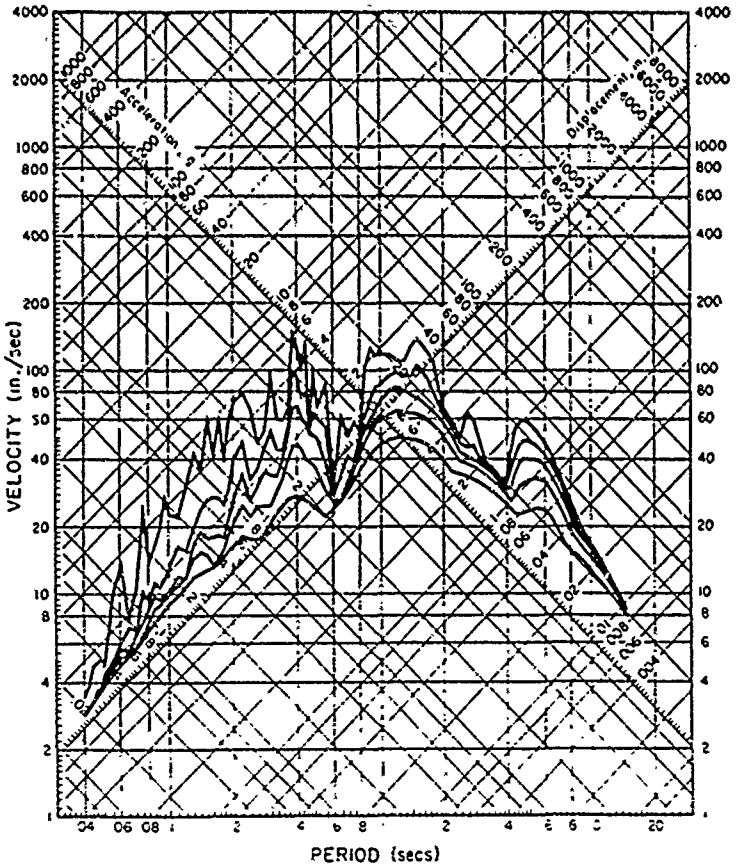
LYTLE CREEK EARTHQUAKE

SEP 12, 1970 - 0630 PST

CAL 21



CIT EERL 72-51



CIT EERL 73-81

IIICOM1 71.001.0 PACOIMA DAM, CAL.

COMP S14W

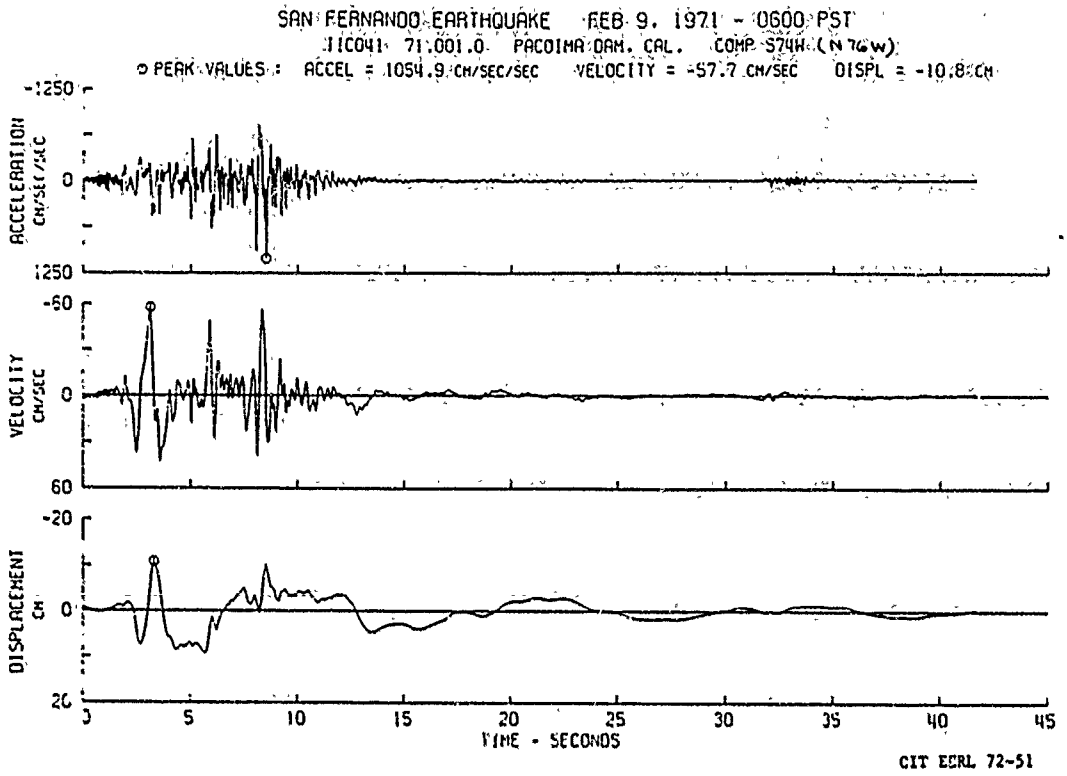
DAMPING VALUES ARE

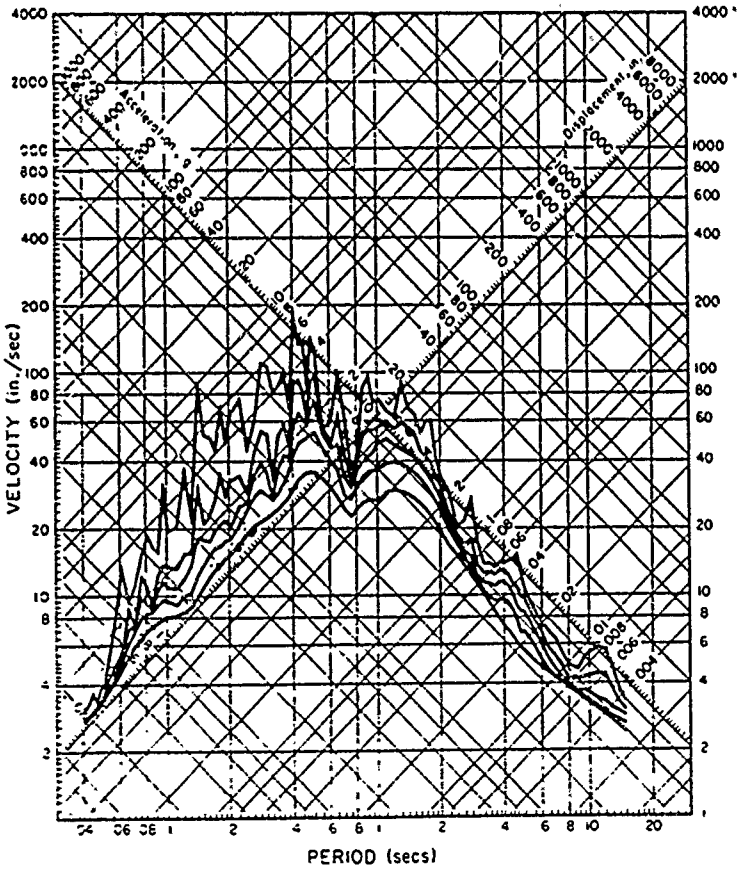
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE

FEB 9, 1971 - 0600 PST

CAL 22





CIT EERL 73-81

IIICOM1 71.001.0 PACOIMA DAM, CAL.

COMP N76W

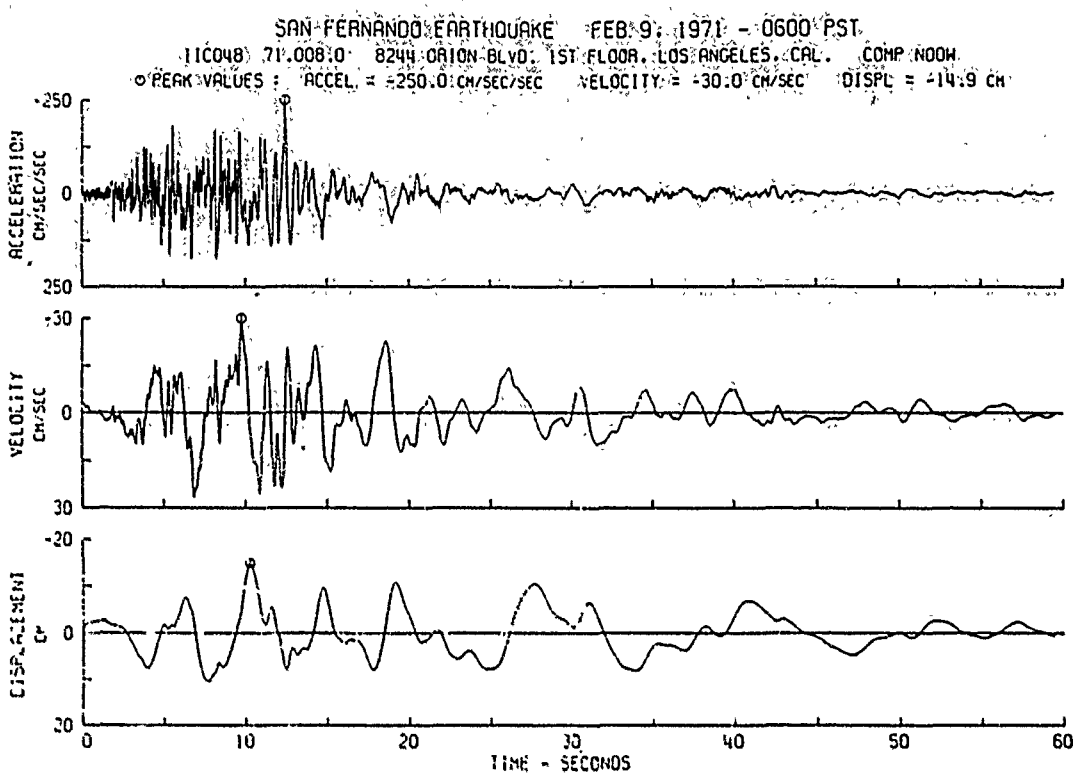
DAMPING VALUES ARE

0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

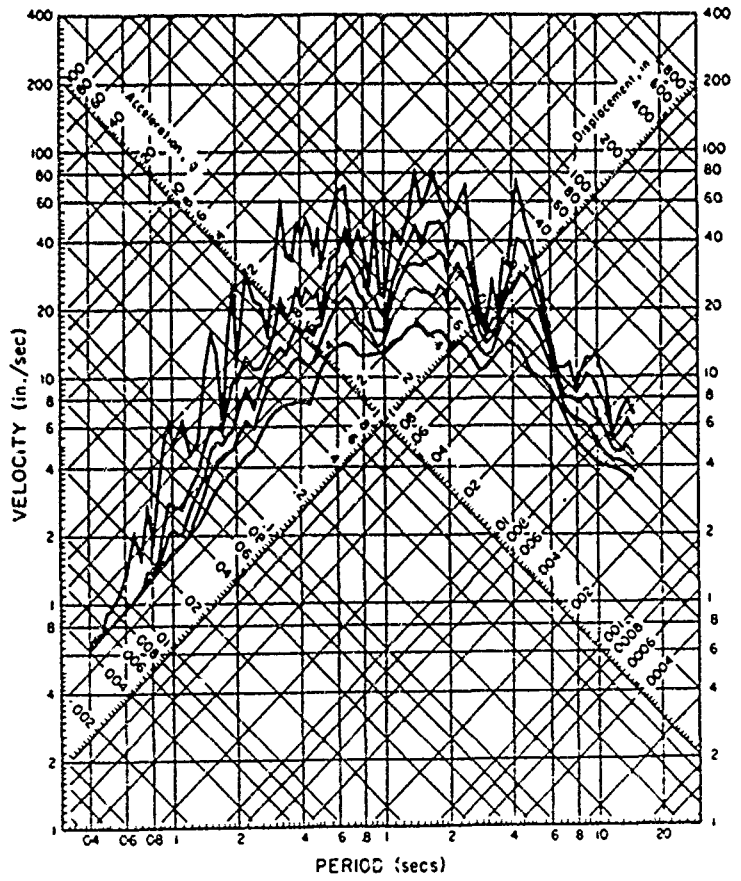
SAN FERNANDO EARTHQUAKE

FEB 9, 1971 - 0600 PST

CAL 23



CIT EERL 72-81

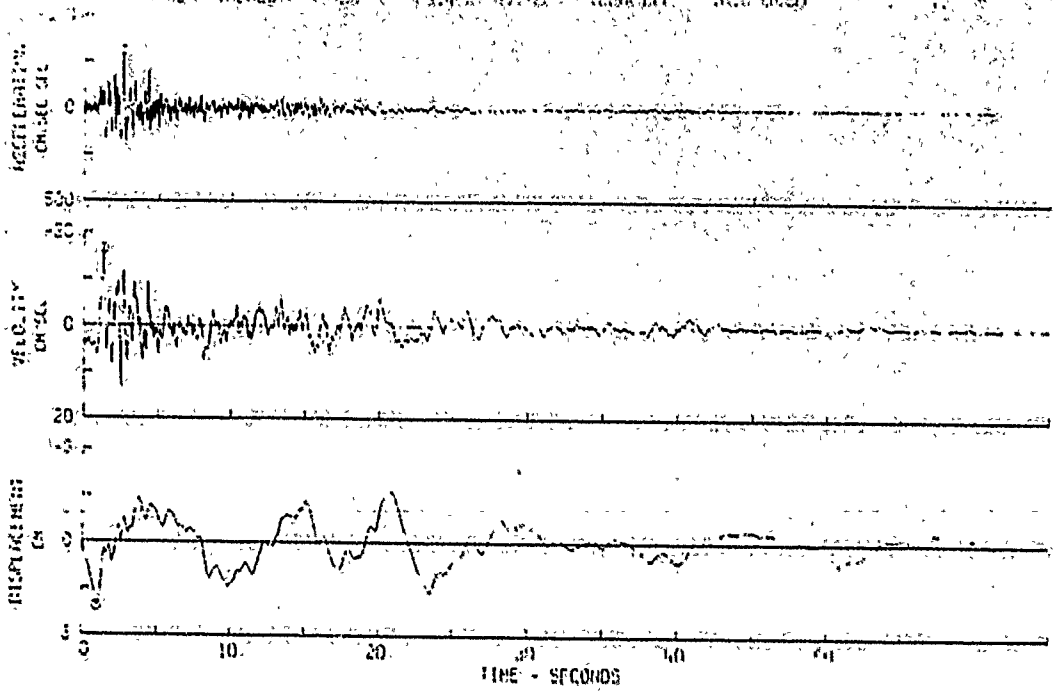


CIT EERL 73-81

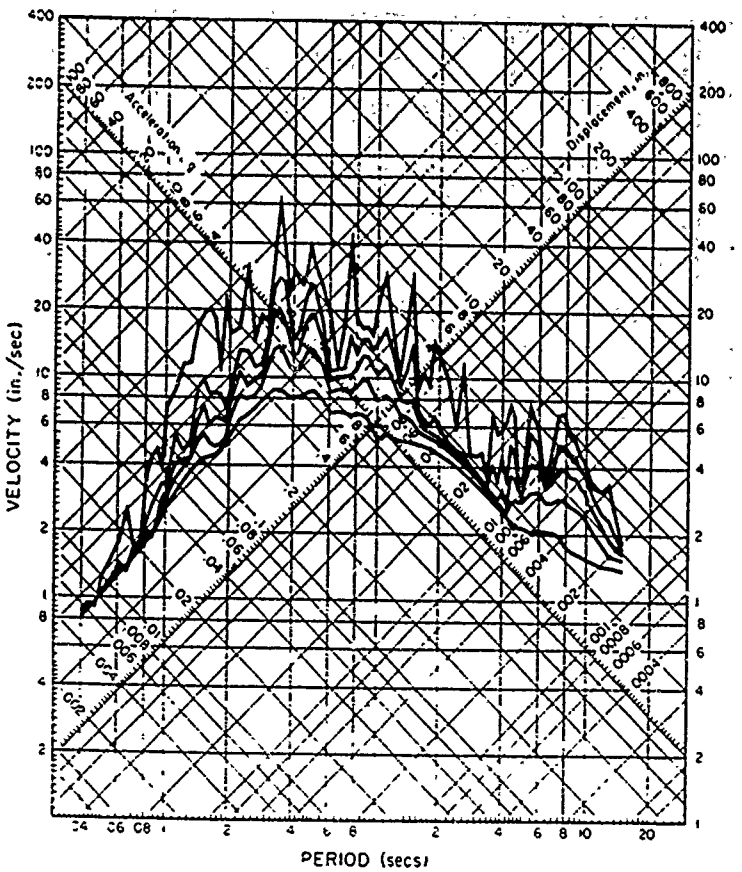
8244 ORION BLVD. 1ST FLOOR
LOS ANGELES, CAL.
IIIC048 71.008.0 COMP NOOW
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 24



CIT EERL 72-52



CIT EERL 73-82

III0058 71.007.0 CRSTAIC OLD RIDGE ROUTE, CAL.

COMP N21E.

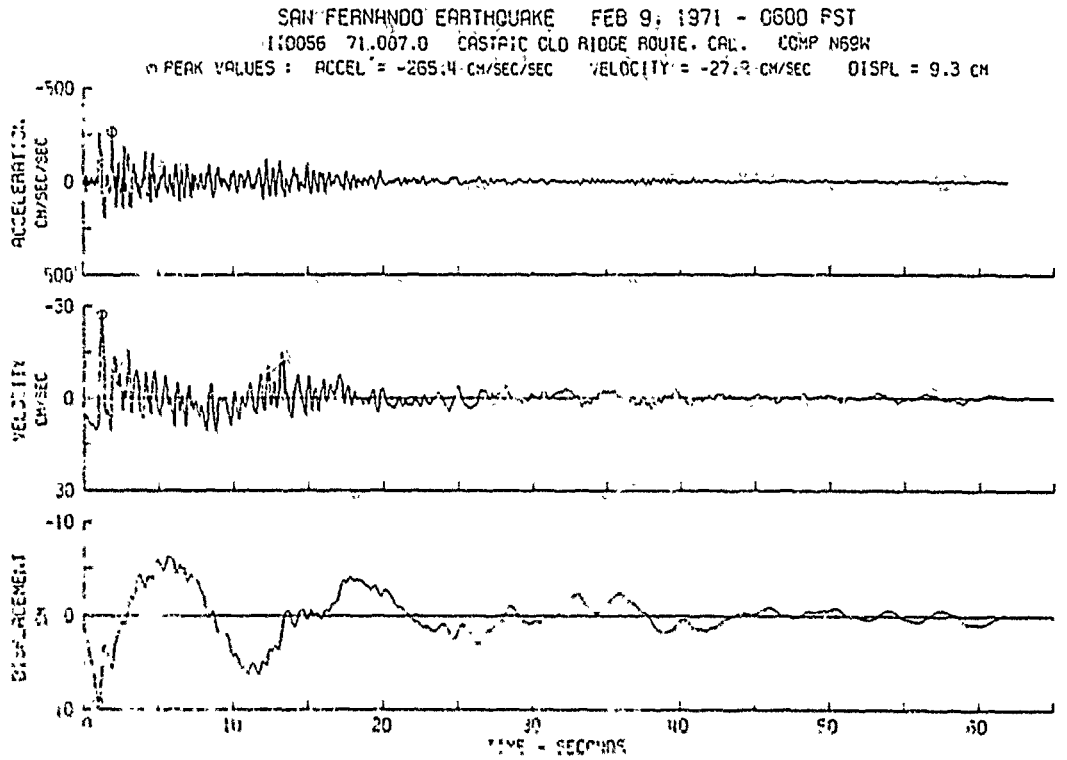
DAMPING VALUES ARE

0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

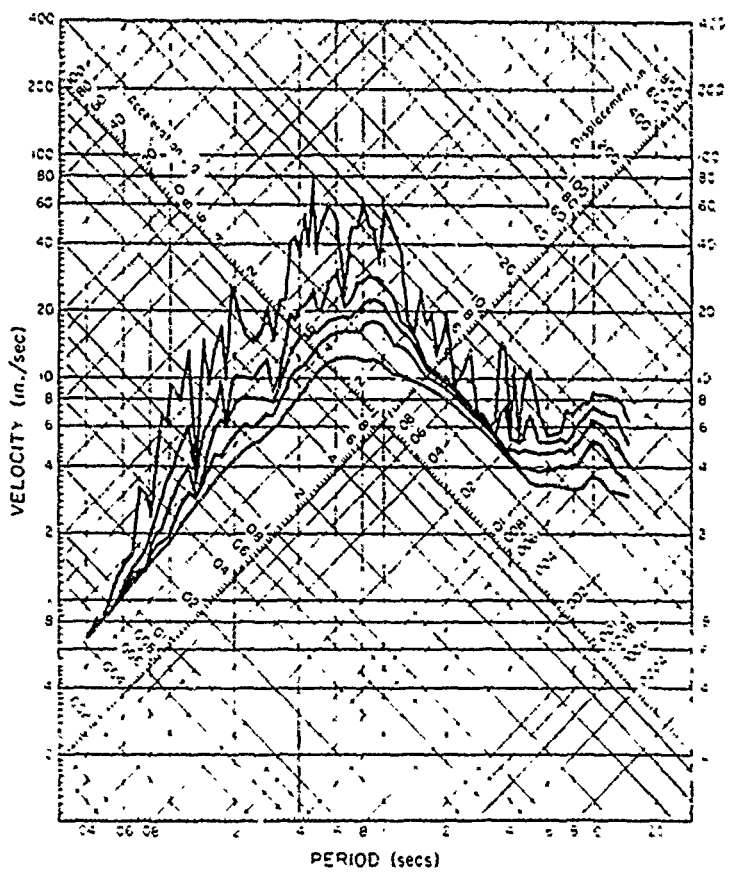
SAN FERNANDO EARTHQUAKE

FEB 9, 1971 - 0600 PST

CAL 25



CIT EERL 72-52



CIT EERL 73-82

1110056 71.007.0 CASTAIC OLD RIDGE ROUTE, CAL.

COMP N69W.

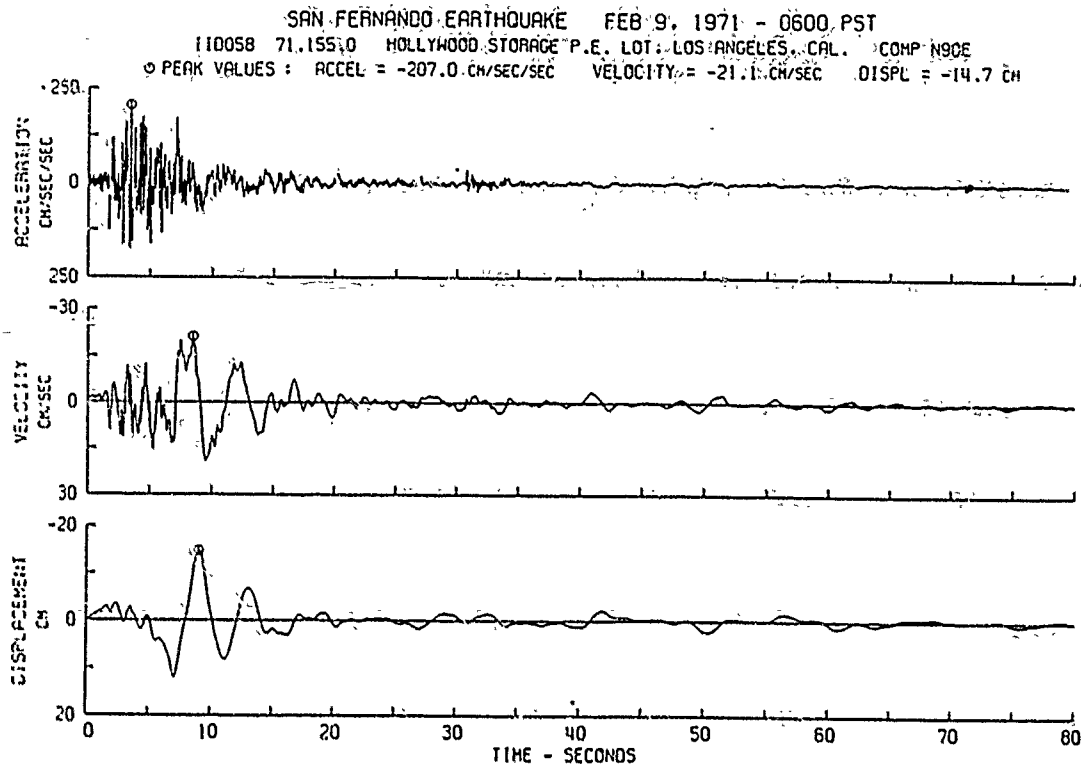
DAMPING VALUES ARE

0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

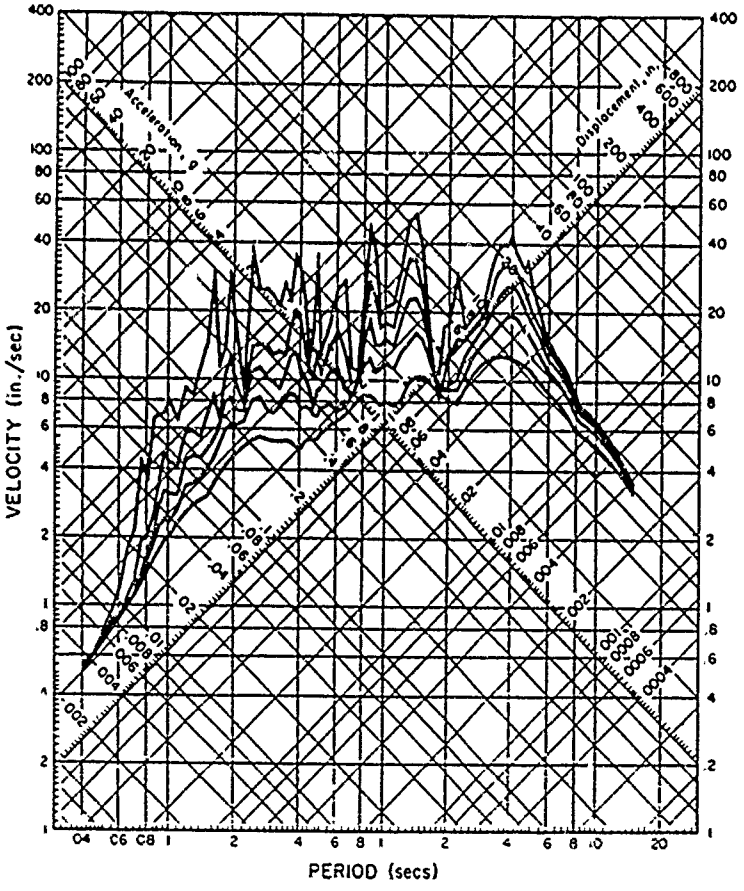
SAN FERNANDO EARTHQUAKE

FEB 9, 1971 - 0600 PST

CAL 26



CIT EERL 72-52

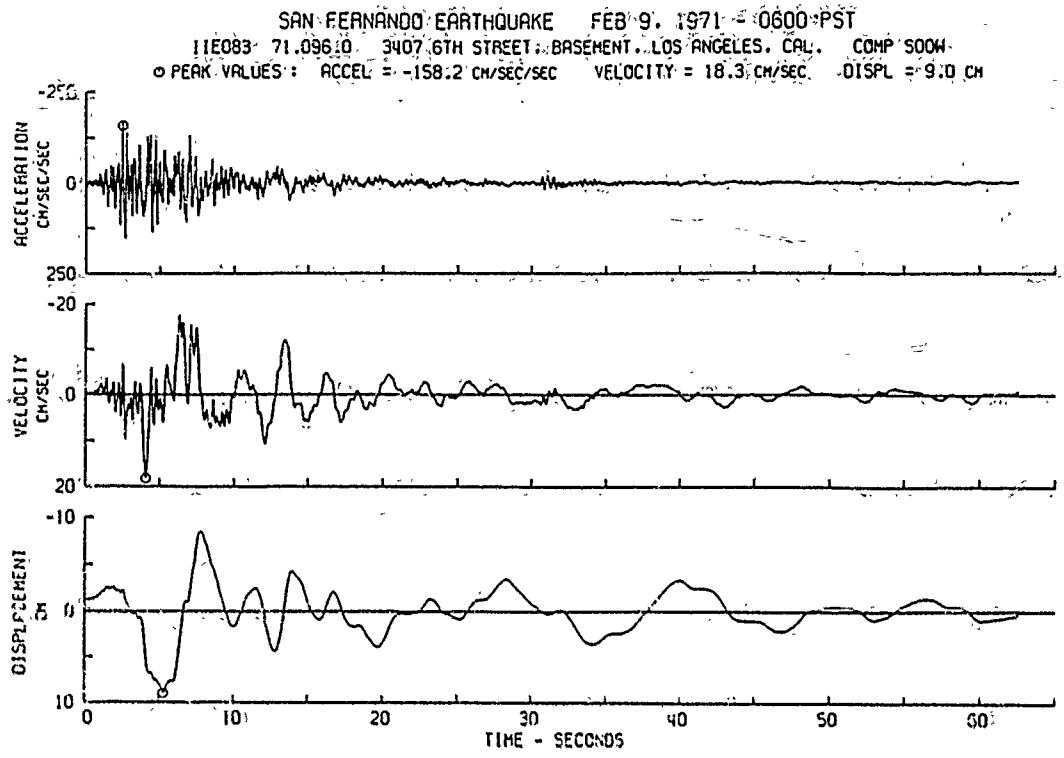


CIT EERL 73-82

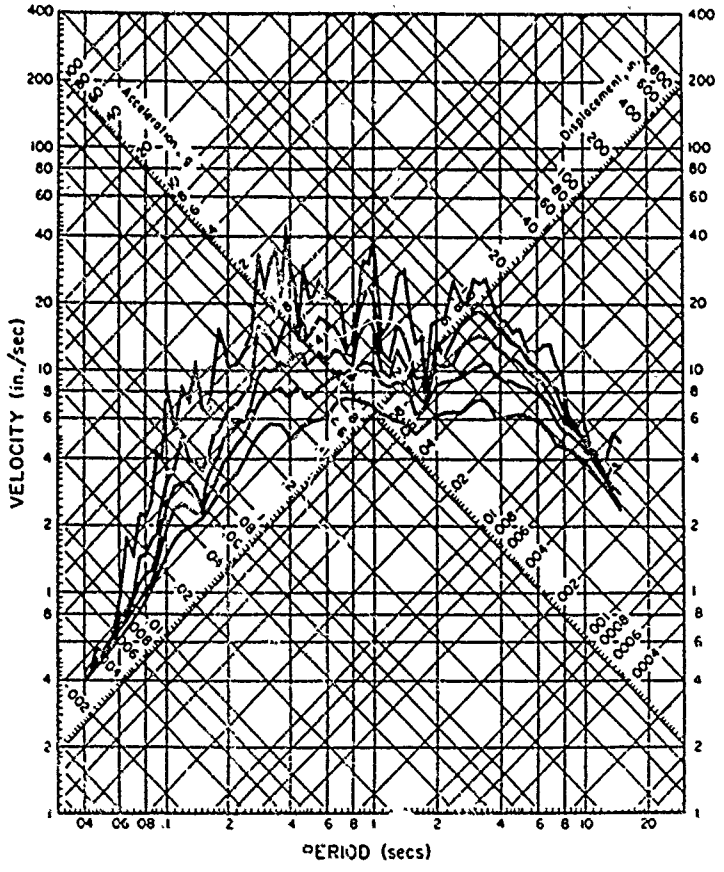
HOLLYWOOD STORAGE P.E. LOT
LOS ANGELES, CAL.
III058 71.155.0 COMP N90E
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 27



CIT EERL 73-50

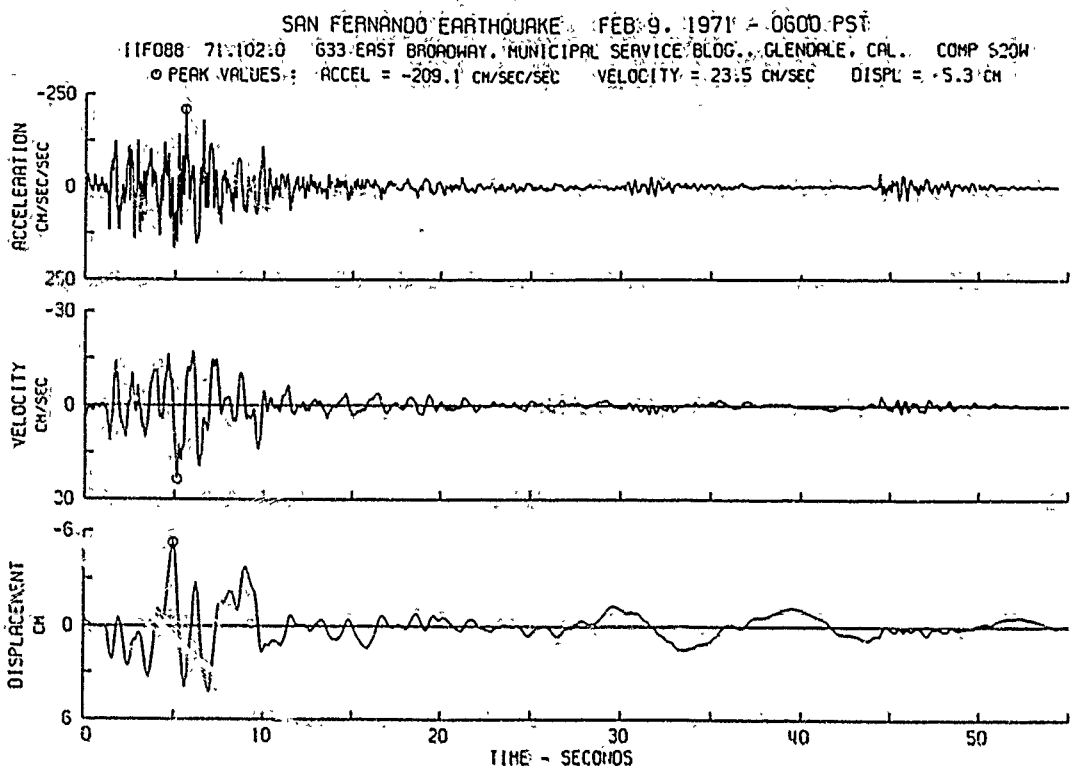


CIT EERL 73-83

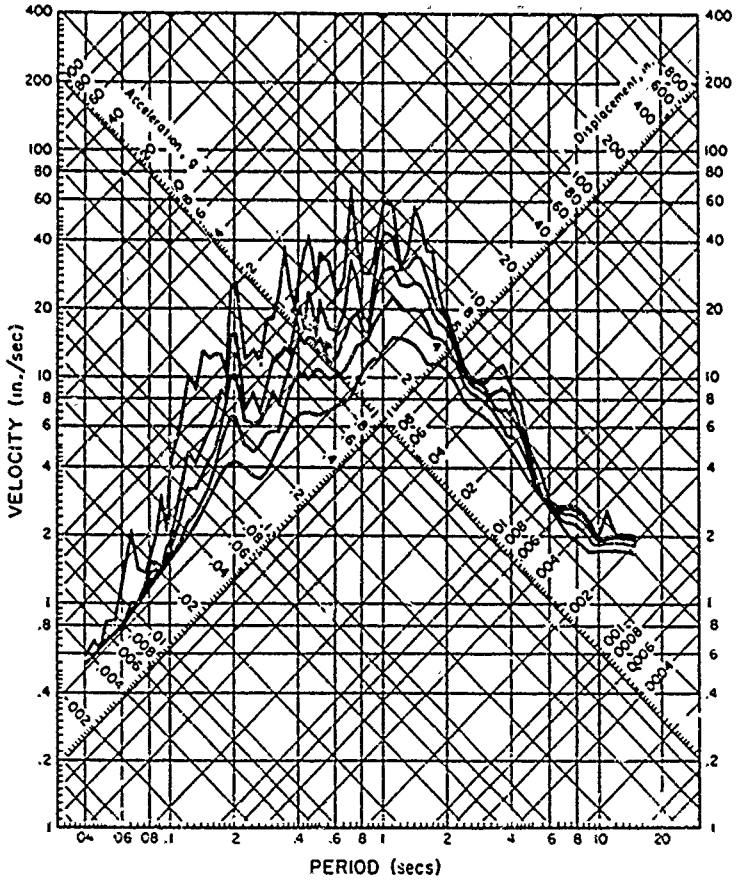
3407 6TH STREET, BASEMENT
LOS ANGELES, CAL.
IIIE083 71.096.0 COMP S00W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 31



CIT EERL 73-51

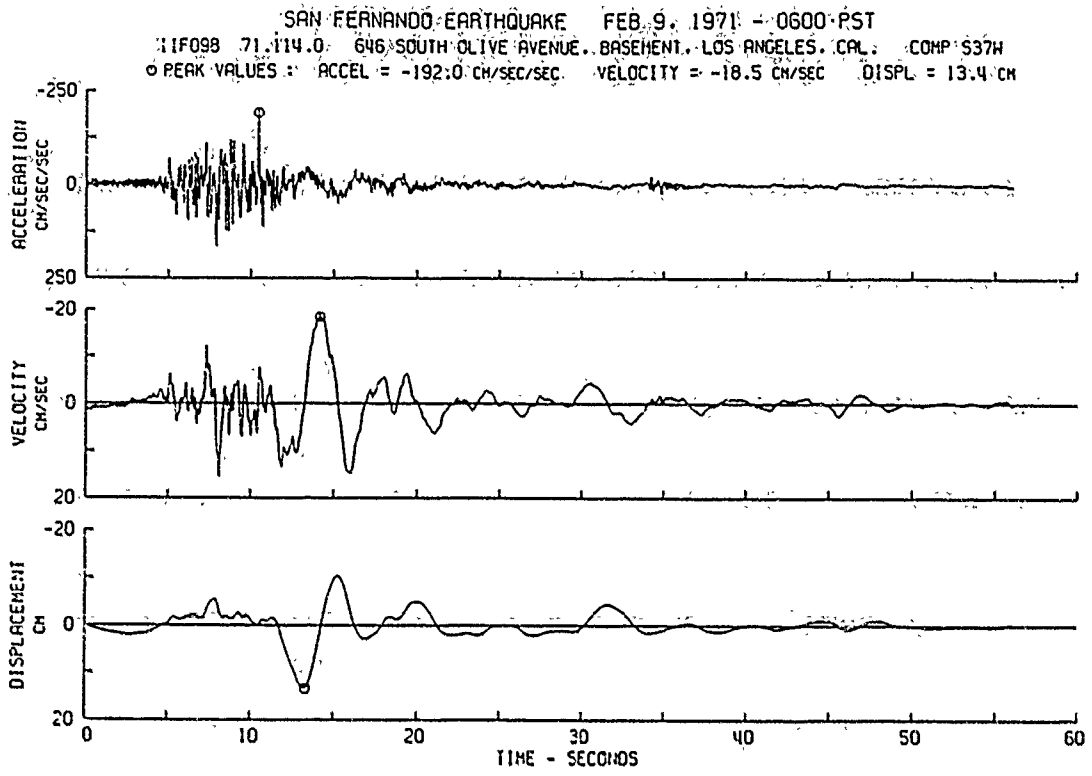


CIT EERL 73-84

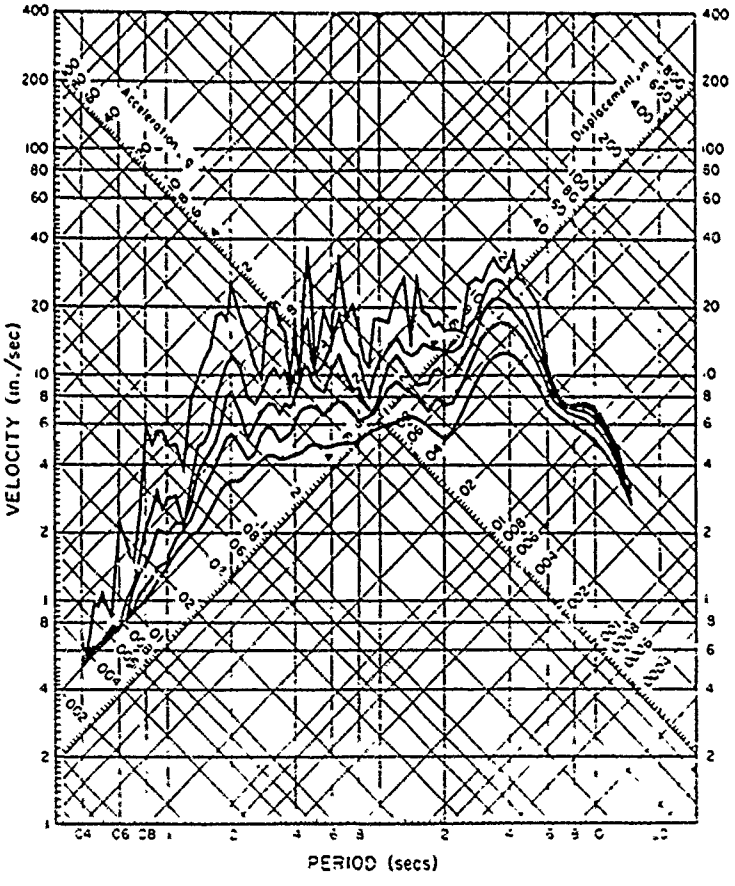
633 EAST BROADWAY
MUNICIPAL SERVICE BLDG., GLENDALE, CAL.
IIIF088 71.102.0 COMP S20W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 33



CIT EERL 73-51

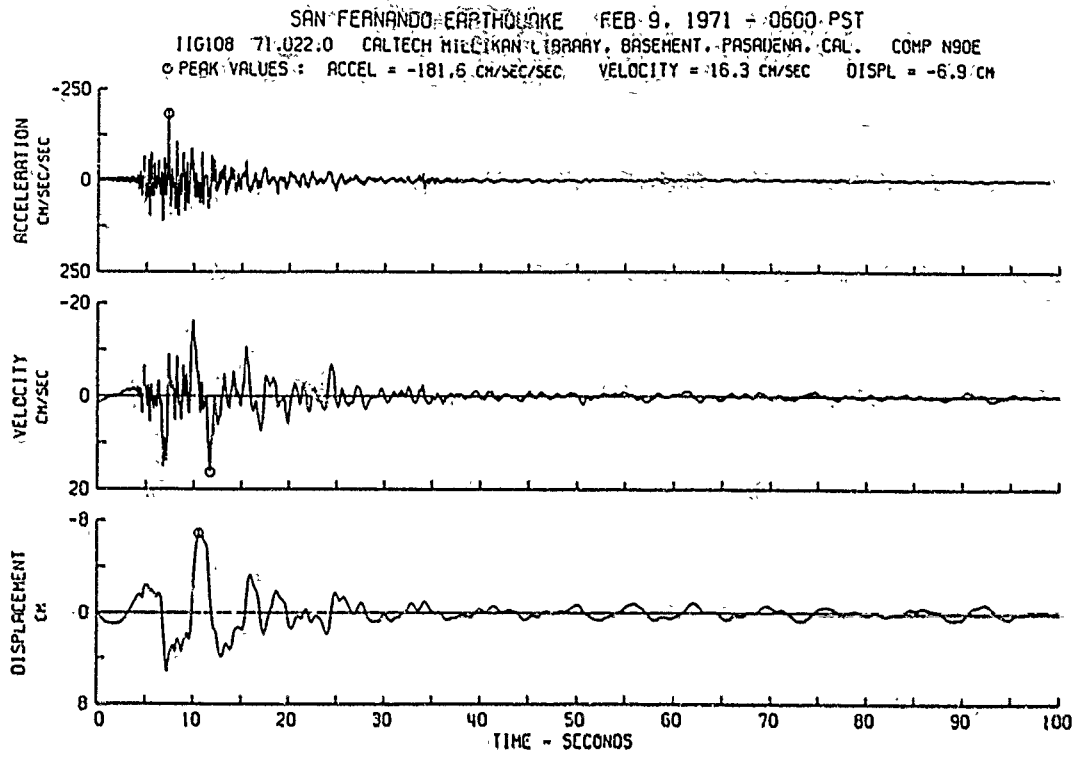


CIT EERL 73-84

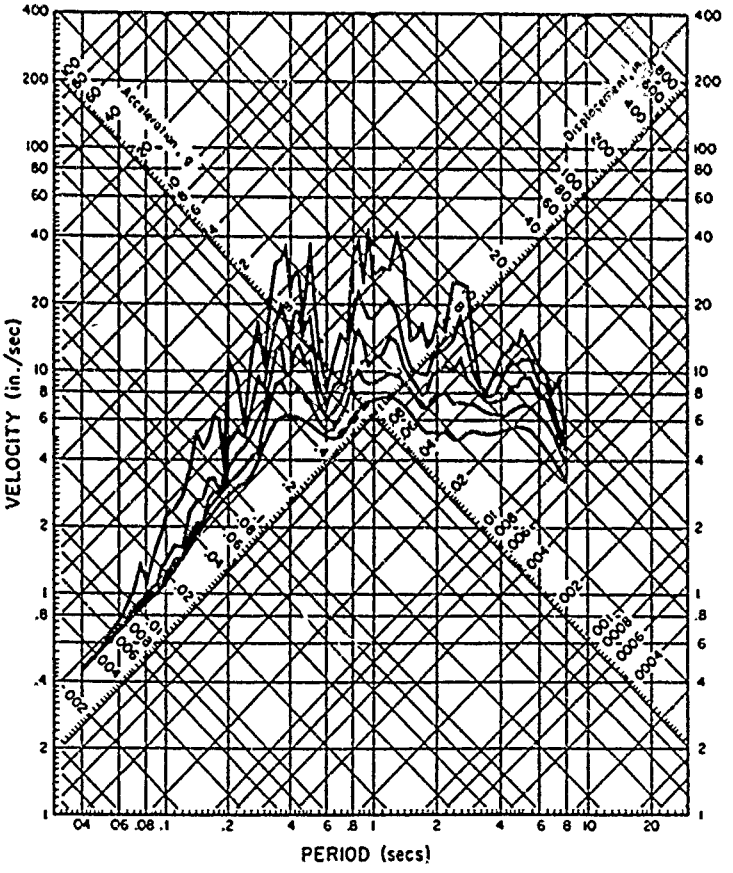
646 SOUTH OLIVE AVENUE, BASEMENT
LOS ANGELES, CAL.
IIIF098 71.114.0 COMP S37W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 35



CIT EERL 73-52

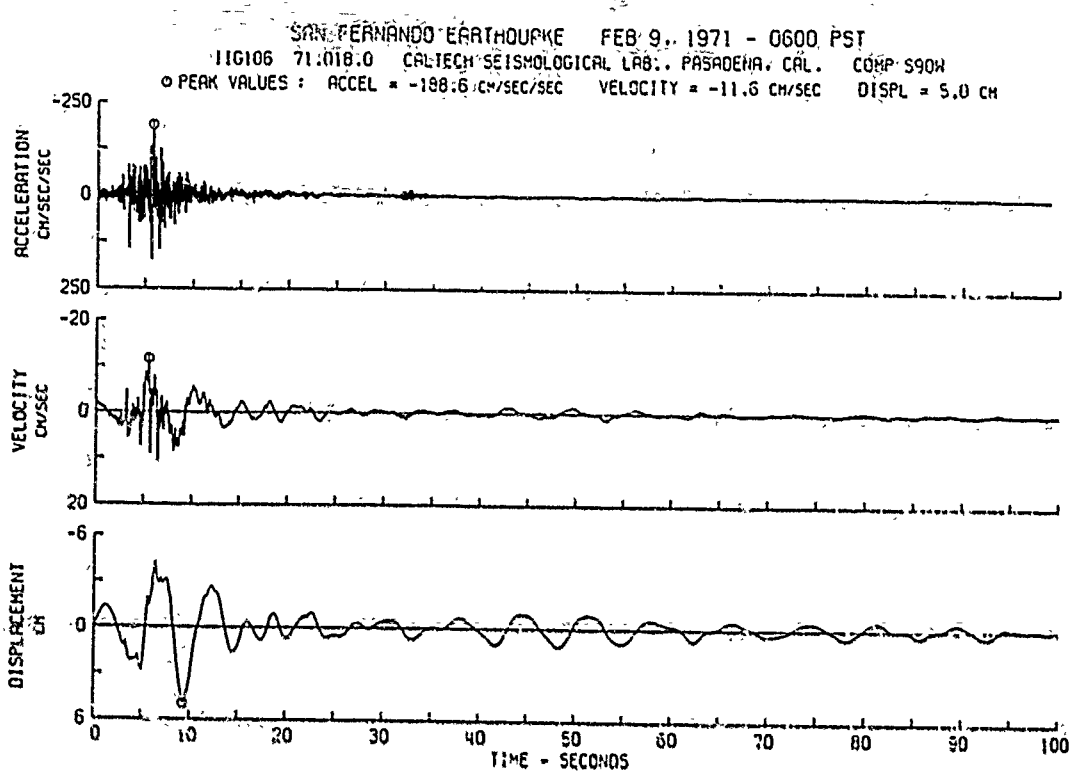


CIT EERL 73-85

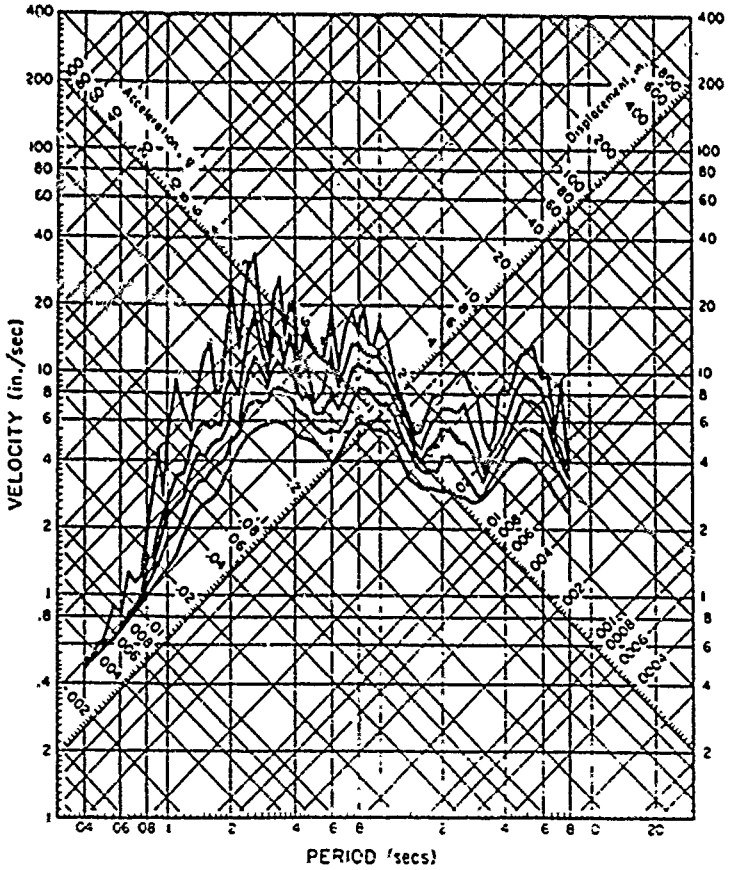
CALTECH MILLIKAN LIBRARY, BASEMENT
PASADENA, CAL.
IIIG108 71.022.0 COMP N90E
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 37



CIT EERL 73-52

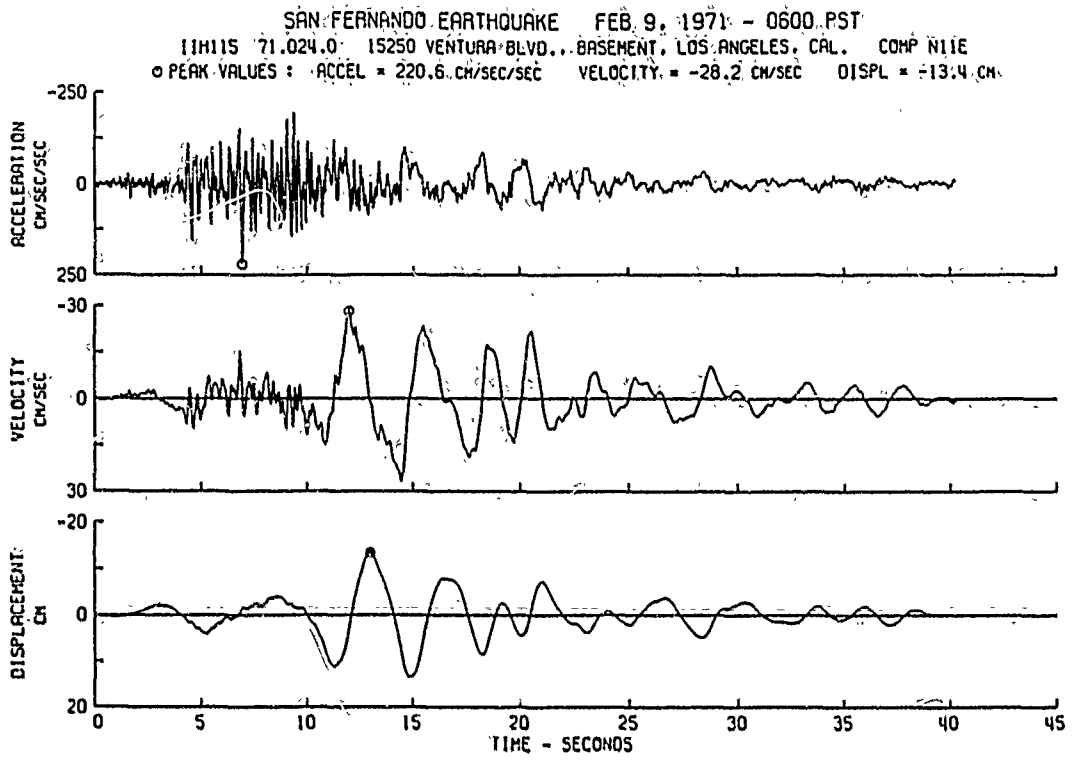


CIT EERL 73-85

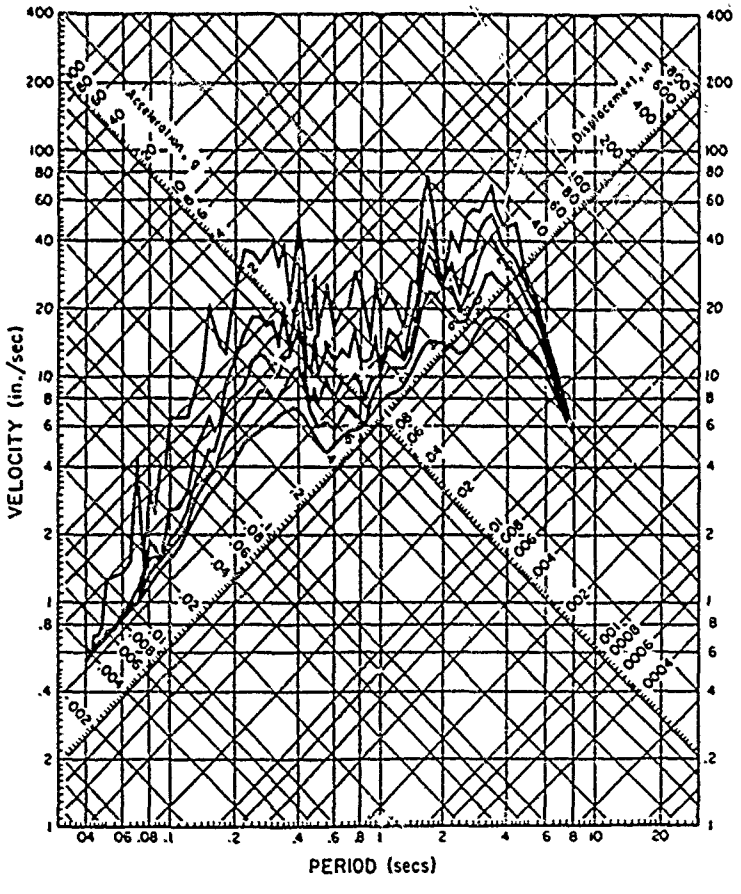
1IG106 71.018.0 CALTECH SEISMOLOGICAL LAB.,
PASADENA, CAL. COMP S90W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 38



CIT EERL 74-50

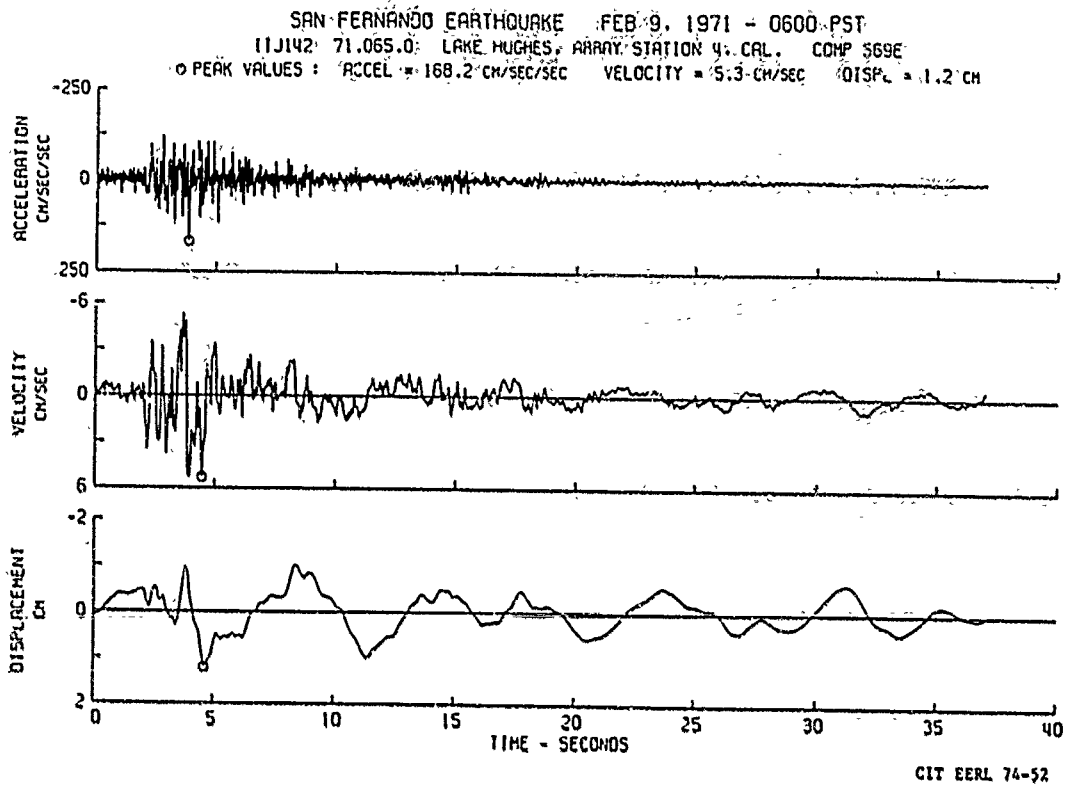


CIT EERL 74-80

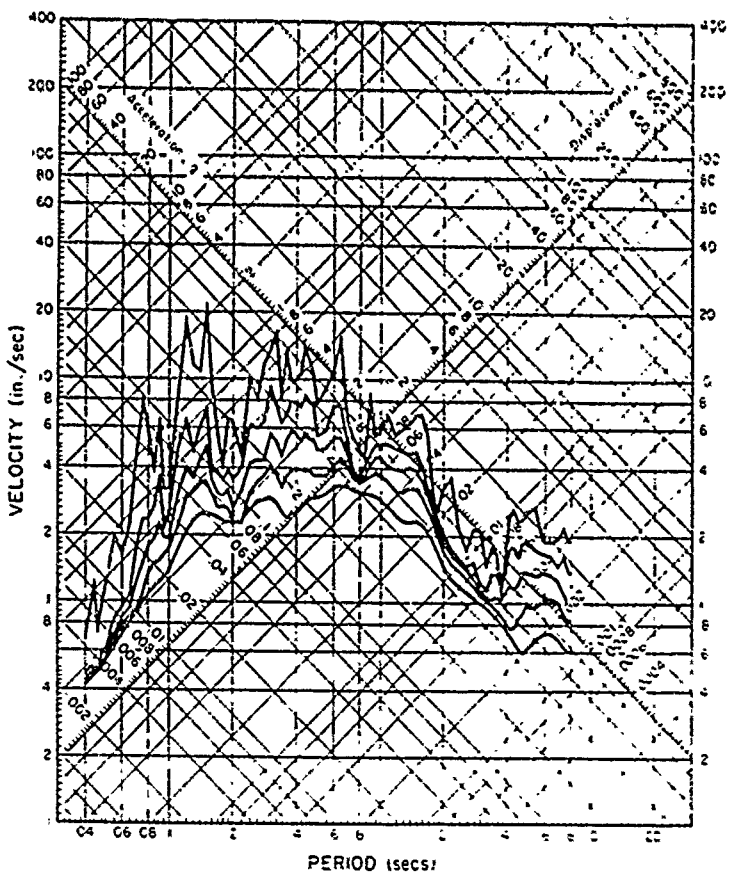
15250 VENTURA BLVD., BASEMENT
LOS ANGELES, CAL.
IIIH115 71.024.0 COMP N11E
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 40



CIT EERL 74-52



CIT EERL 74-82

111J142 71.065.0 LAKE HUGHES, ARRAY STATION 4, CAL.

COMP S69E

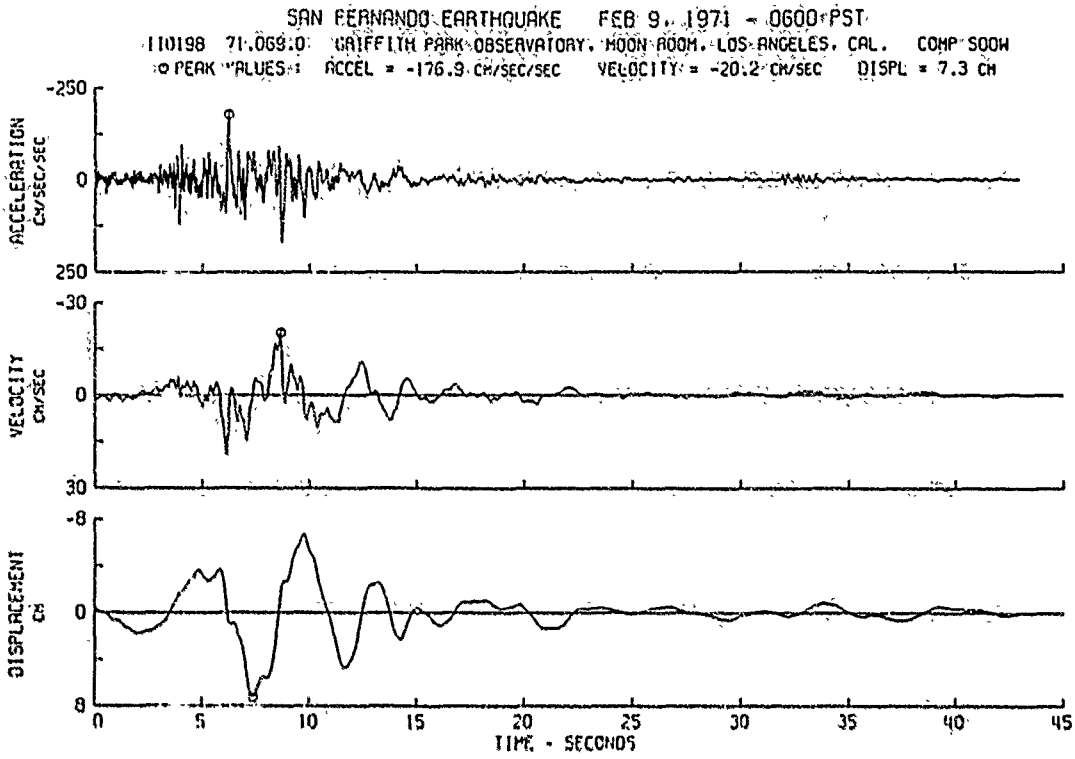
DAMPING VALUES ARE

0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

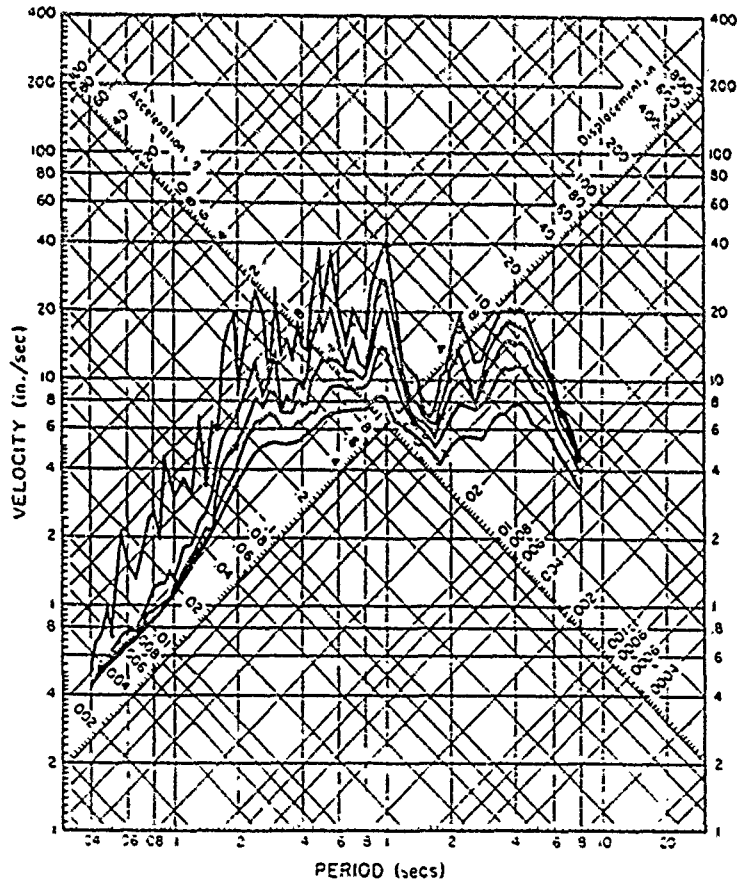
SAN FERNANDO EARTHQUAKE

FEB 9, 1971 - 0600 PST

CAL 43



CIT EERL 74-55

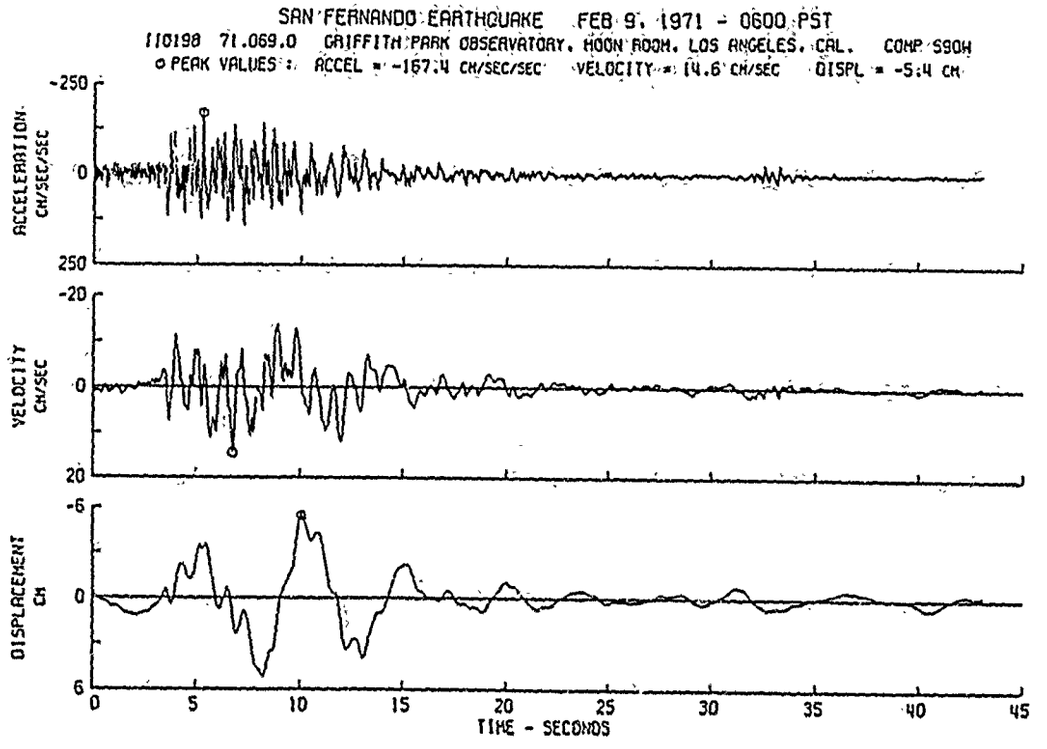


CIT EERL 74-84

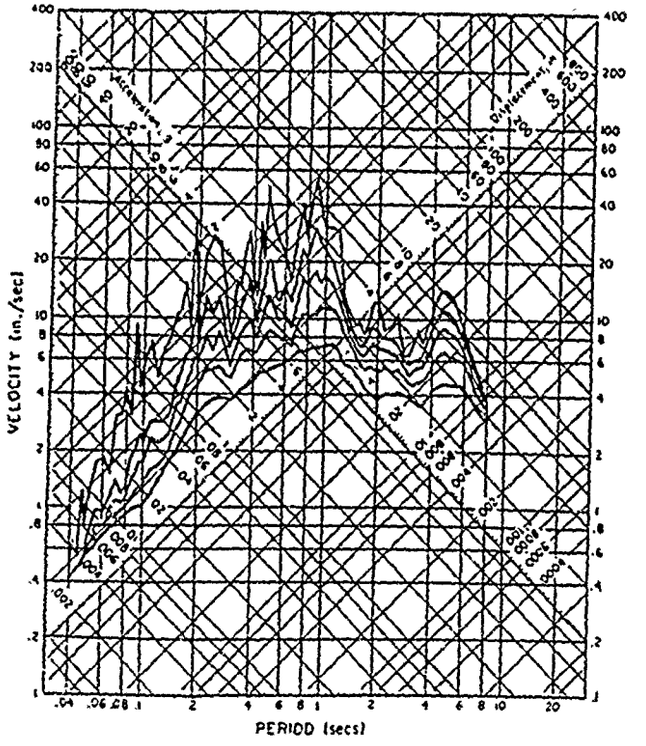
III198 71.069.0 GRIFFITH PARK OBSERVATORY.
MOON ROOM, LOS ANGELES, CAL. COMP S00W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 46



CIT EERL 74-55

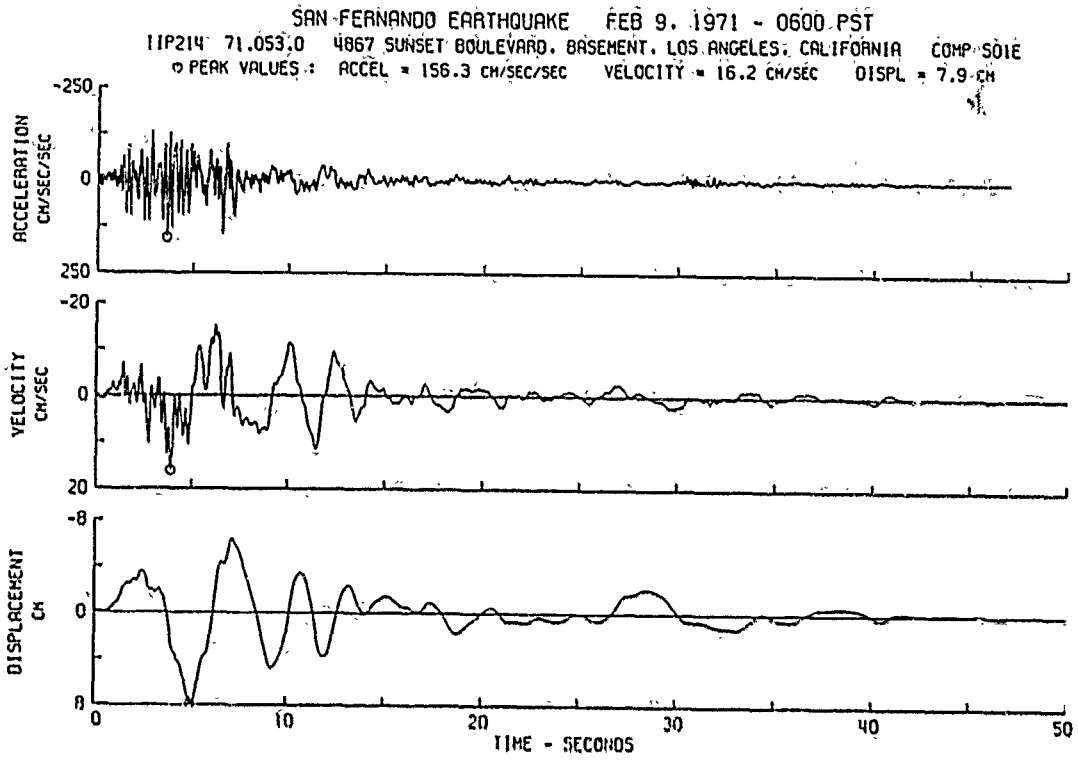


CIT EERL 74-84

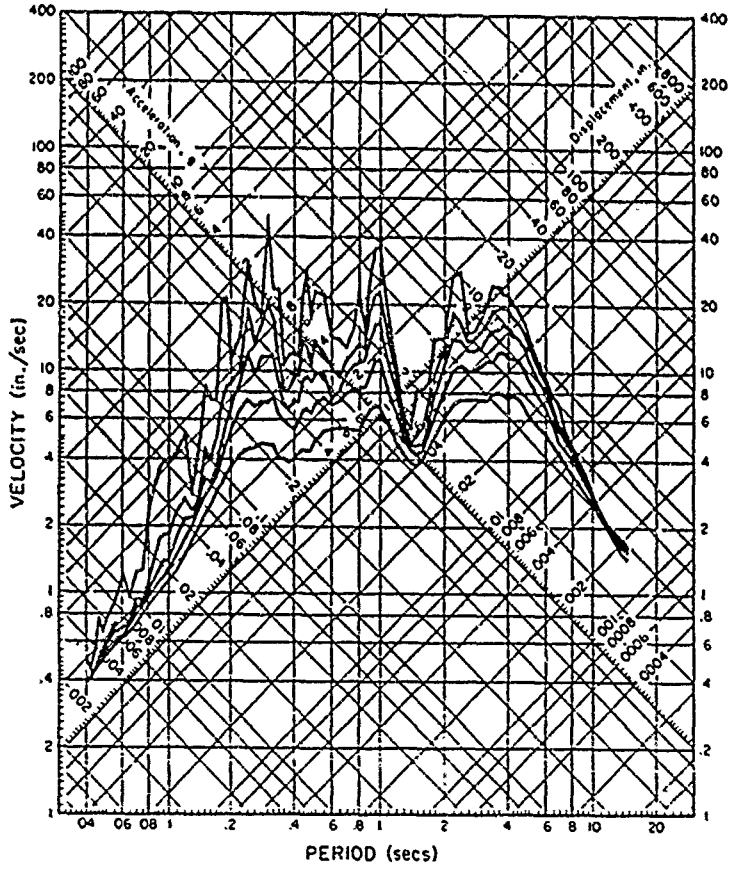
I110198 71.069.0 GRIFFITH PARK OBSERVATORY
HOON ROOM, LOS ANGELES, CAL., COMP S90W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 47



CIT EERL 74-55

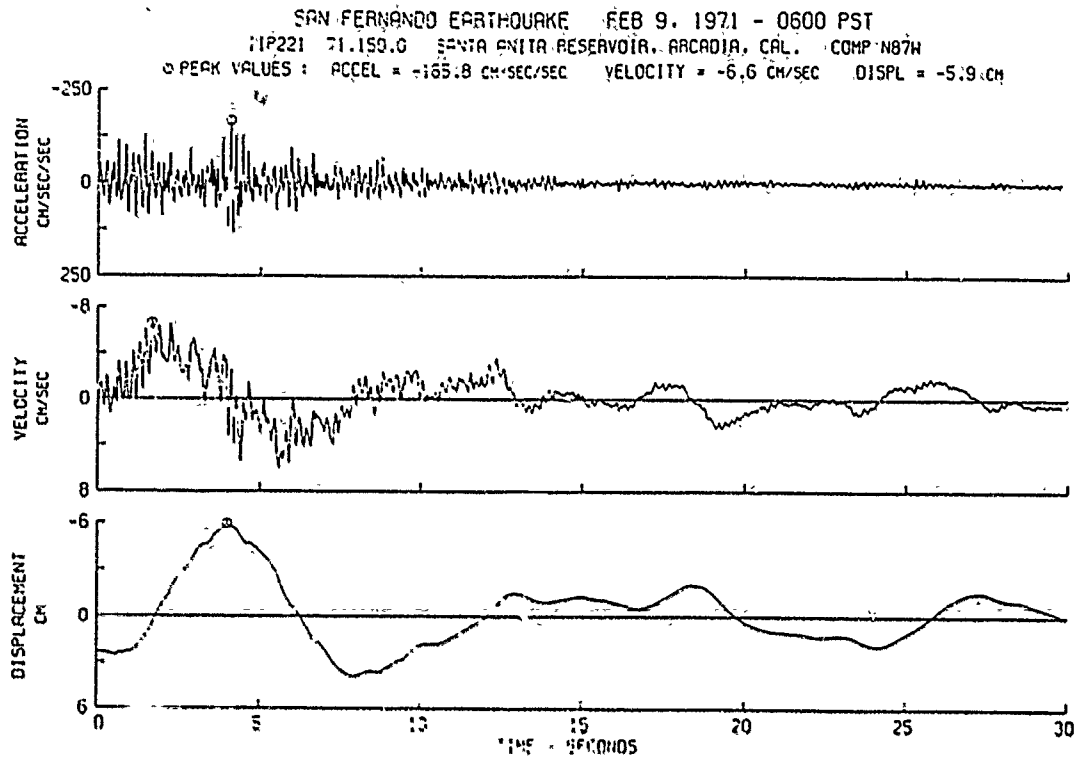


CIT EERL 74-84

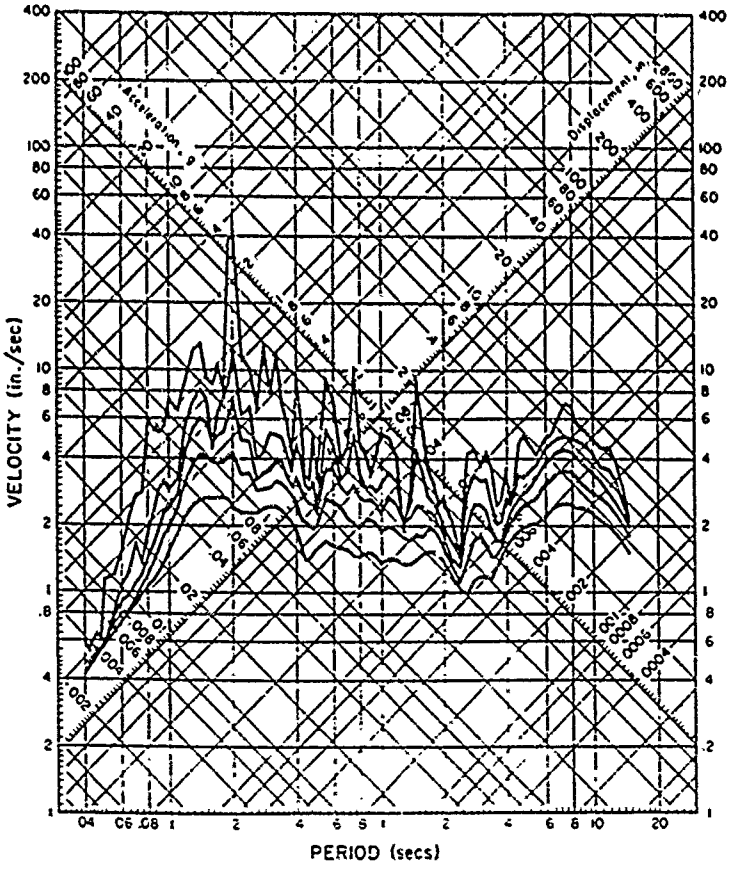
IIP214 71.053.0 4867 SUNSET BOULEVARD, BASEMENT,
LOS ANGELES, CALIFORNIA COMP S01E
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 49



CIT EERL 74-55



CIT EERL 74-84

III P221 71.150.0 SANTA ANITA RESERVOIR, ARCADIA, CAL.

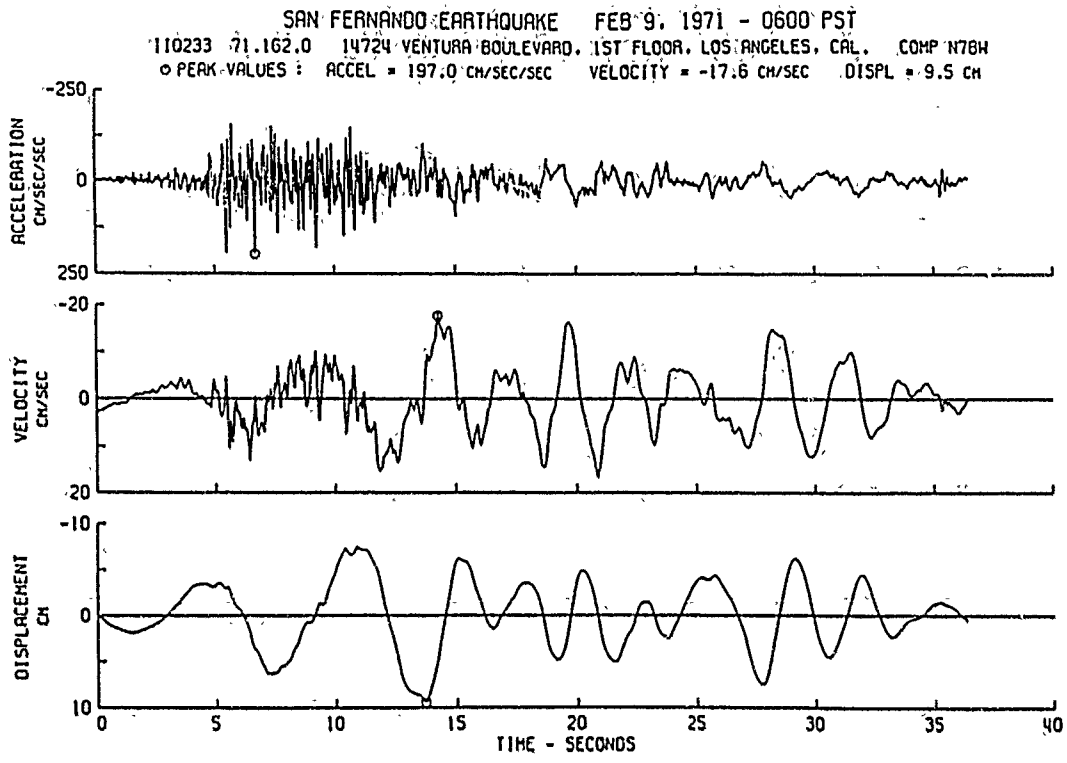
COMP N87W

DAMPING VALUES ARE

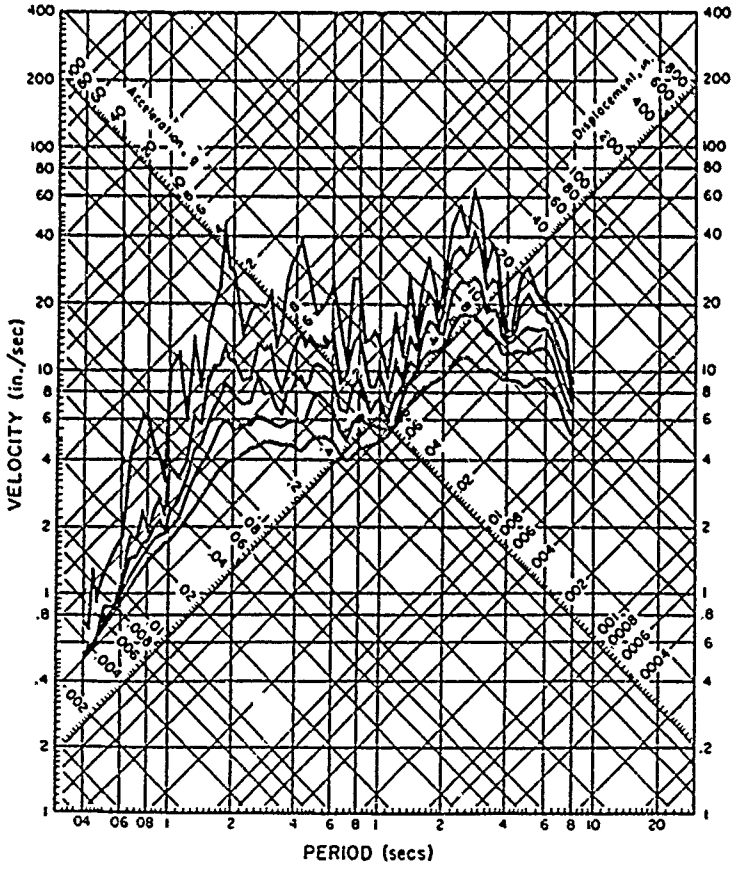
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 51



CIT EERL 74-56

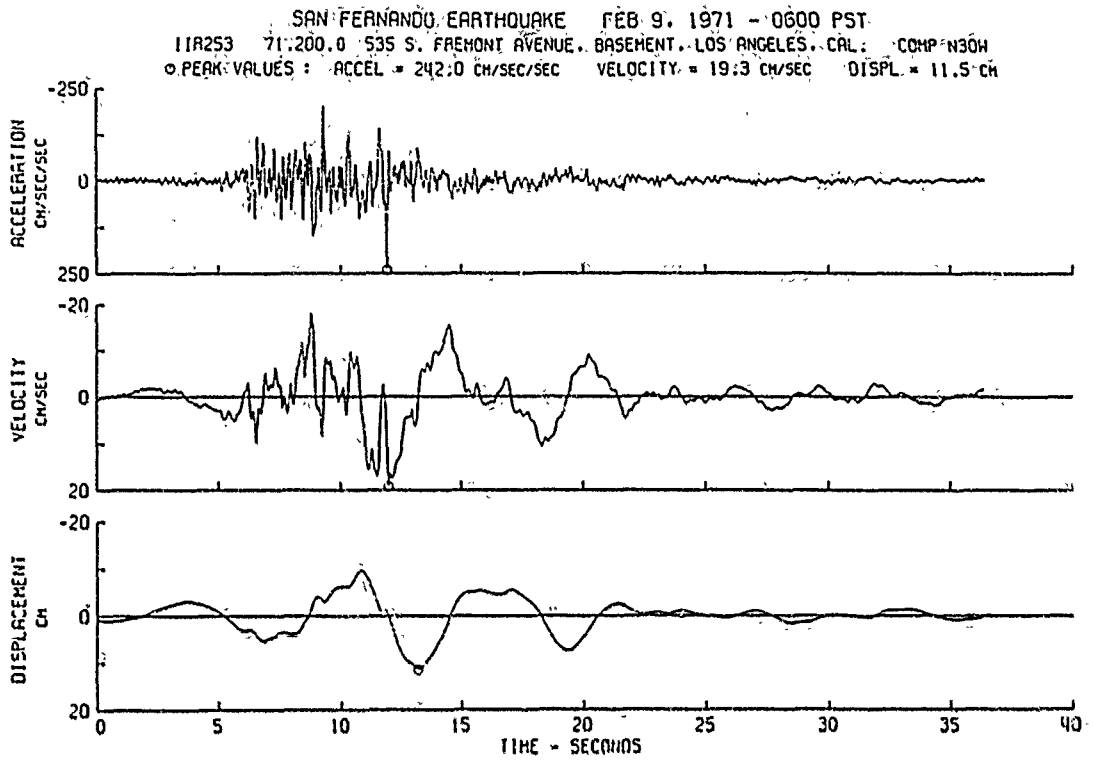


CIT EERL 74-85

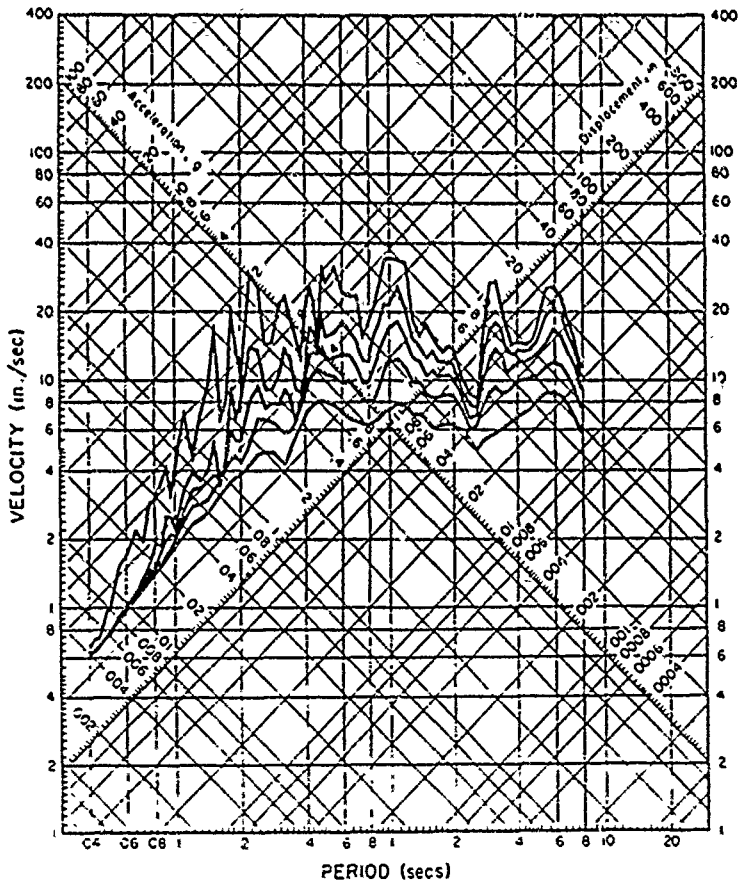
1110233 71.162.0 14724 VENTURA BOULEVARD
1ST FLOOR, LOS ANGELES, CAL. COMP N78W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 53



CIT EERL 74-56

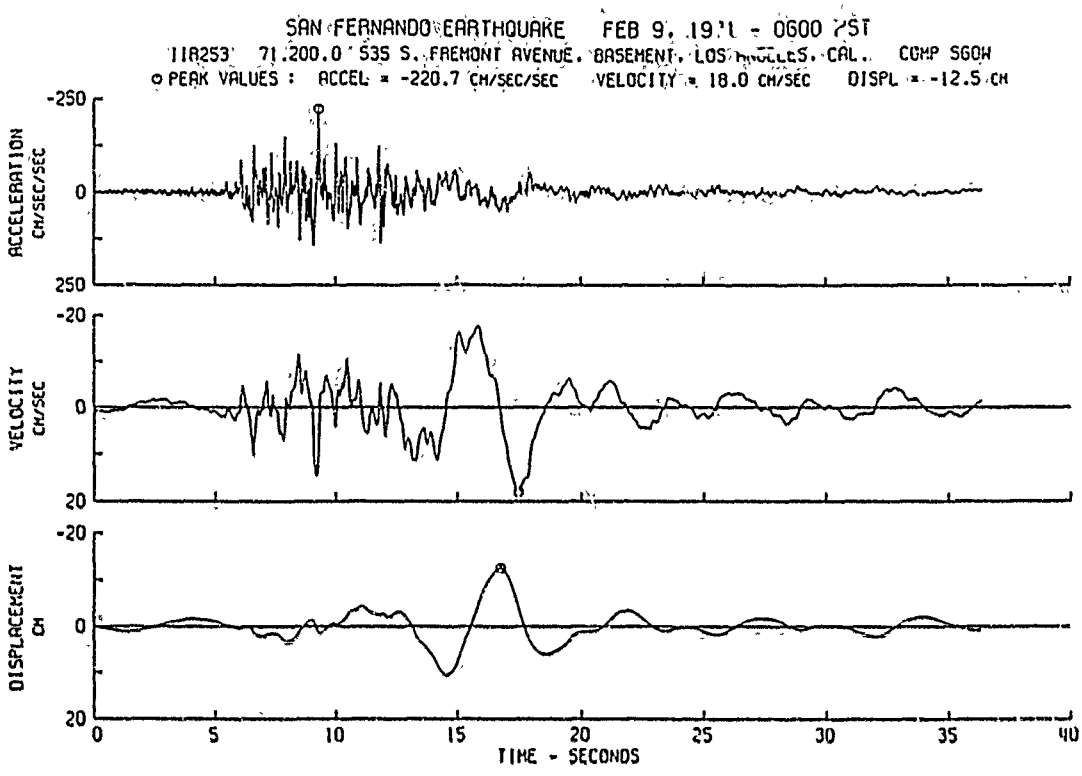


CIT EERL 74-85

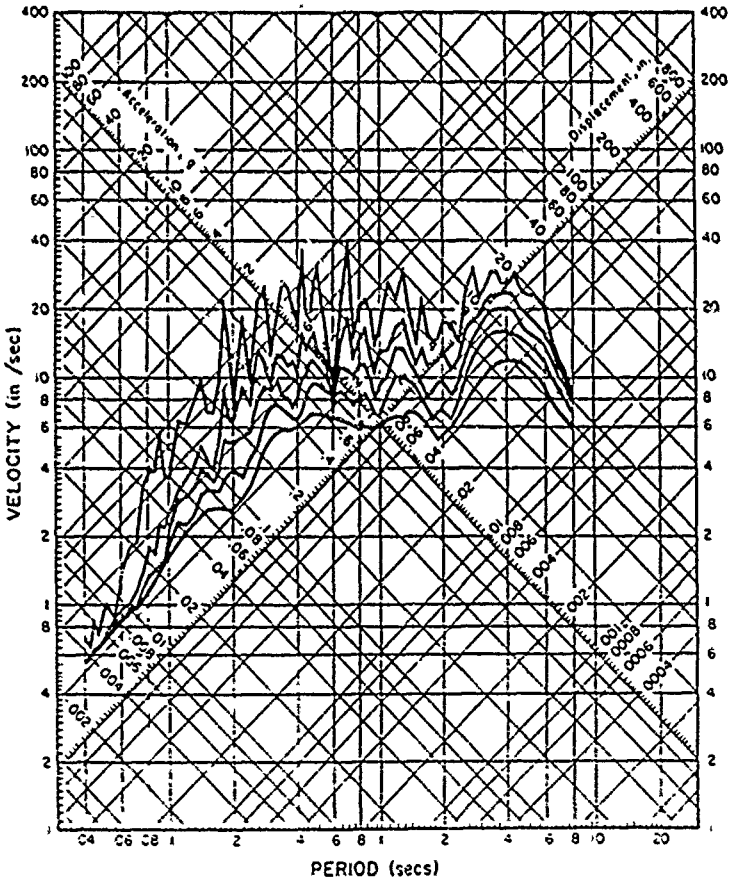
535 S. FREMONT AVENUE, BASEMENT
LOS ANGELES, CAL.
IIIR253 71.200.0 COMP N30W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 60



CIT EERL 74-56

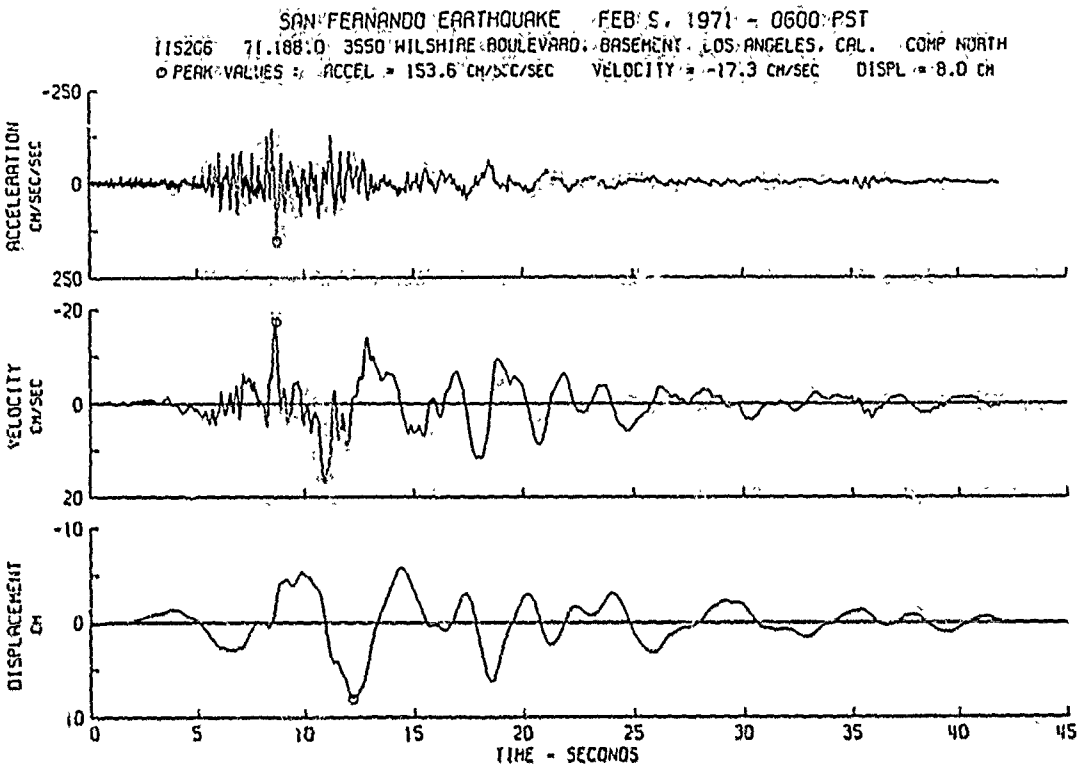


CIT EERL 74-85

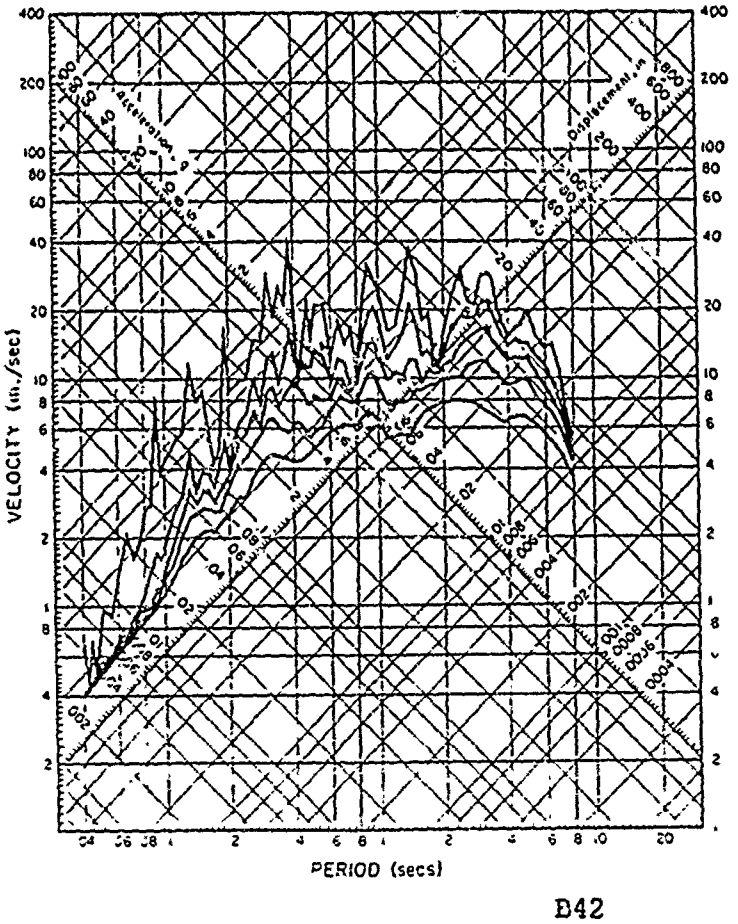
535 S. FREMONT AVENUE. BASEMENT
LOS ANGELES. CAL.
III253 71.200.0 COMP S60W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 61



CIT EERL 74-57

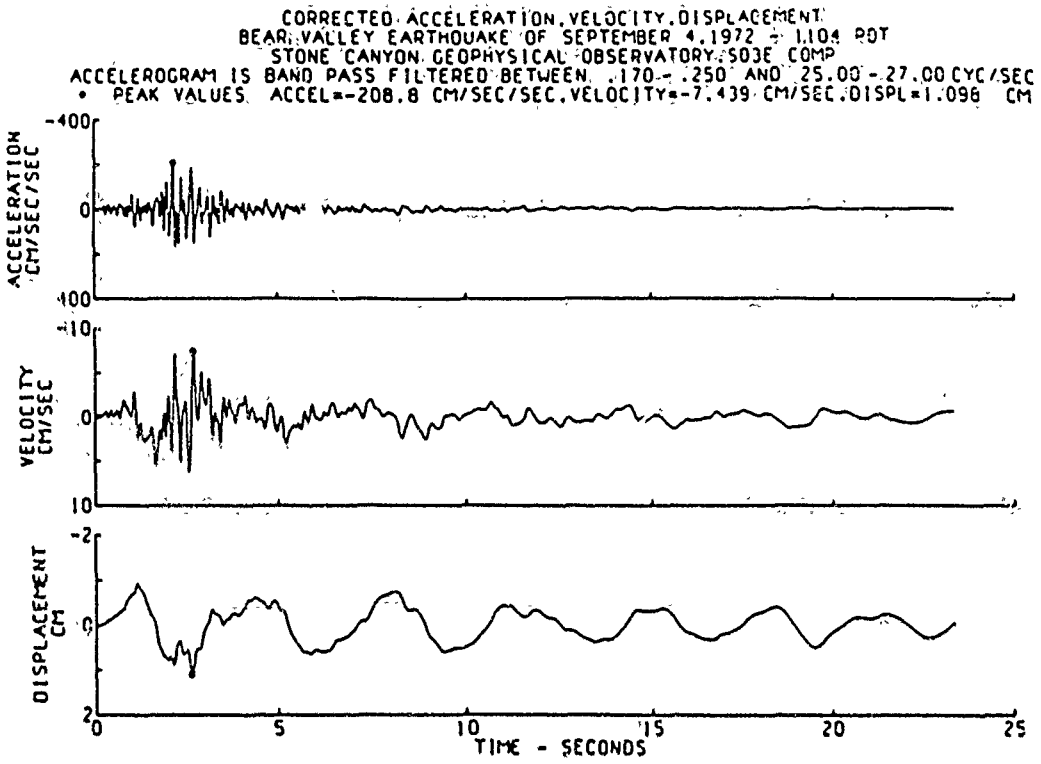


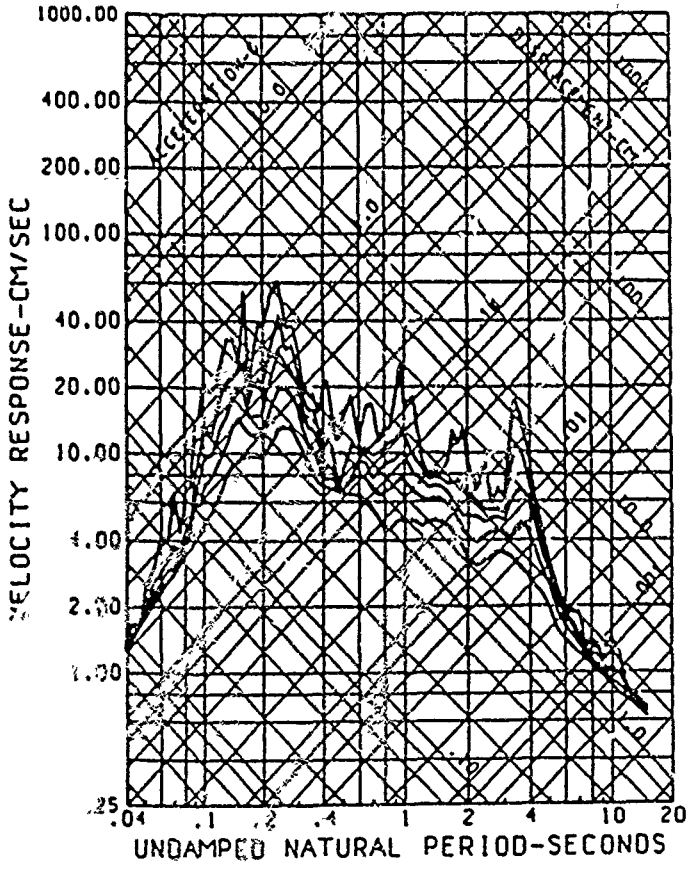
CIT EERL 74-86

3550 WILSHIRE BOULEVARD, BASEMENT
LOS ANGELES, CAL.
IIIS266 71.188.0 COMP NORTH
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

SAN FERNANDO EARTHQUAKE
FEB 9, 1971 - 0600 PST

CAL 62



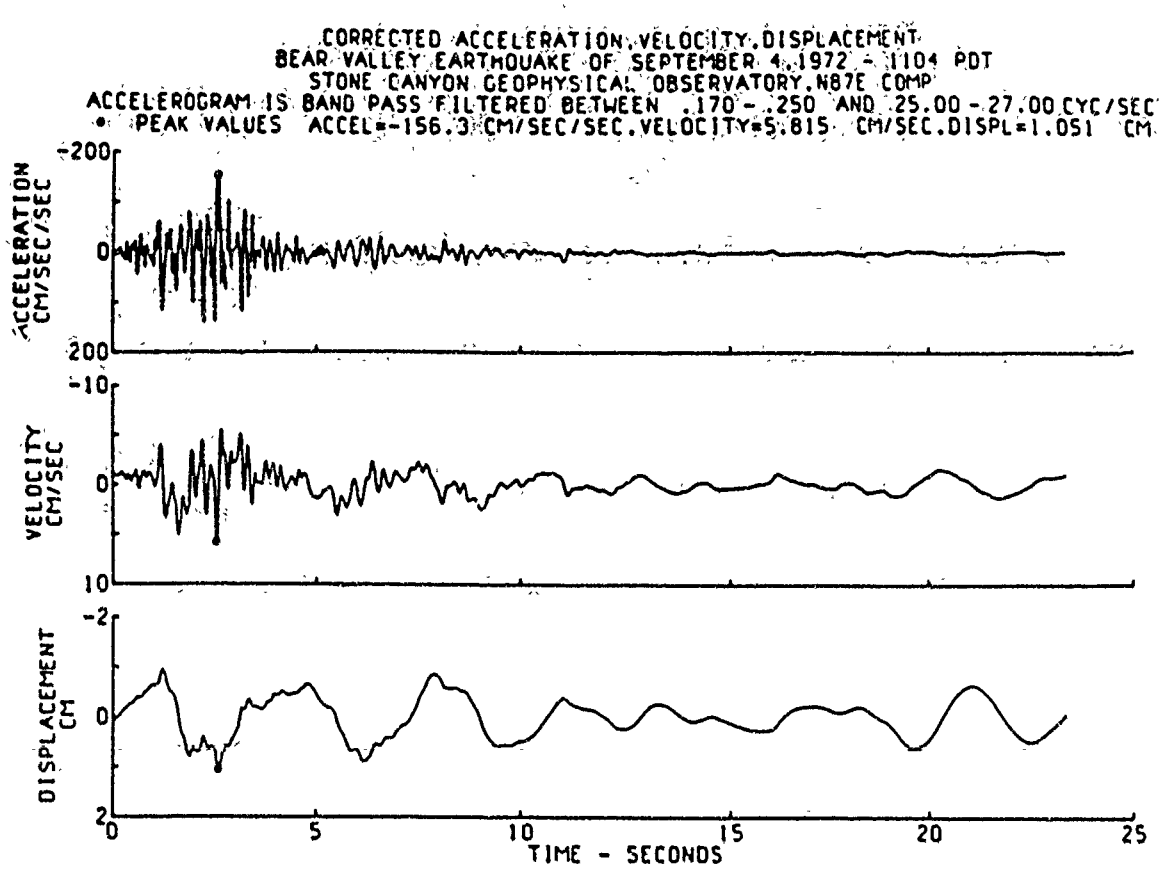


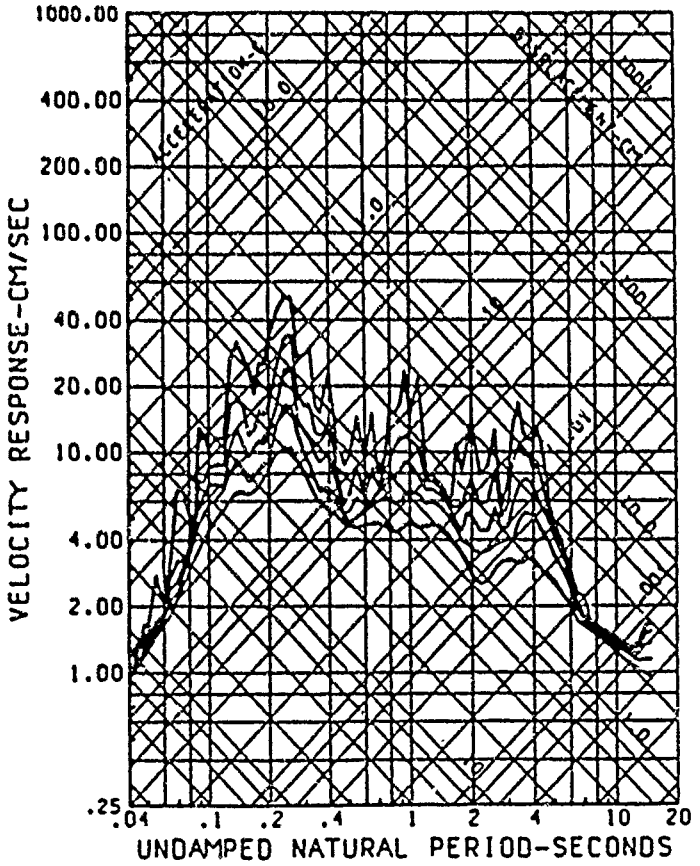
USGS OF 78-941

SEISMIC ENGINEERING
BRANCH/USGS
STONE CANYON GEOPH. OBSERV.
CRITICAL DAMPING
0.2.5.10.20 PERCENT

9/4/72.S03E

CAL 63



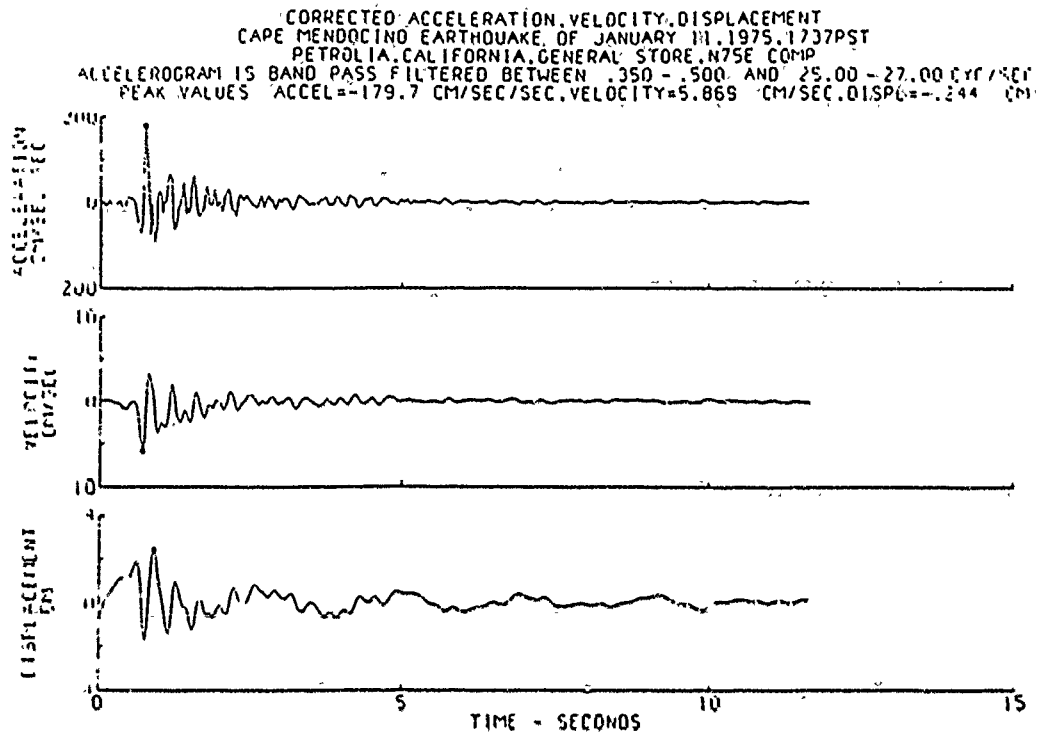


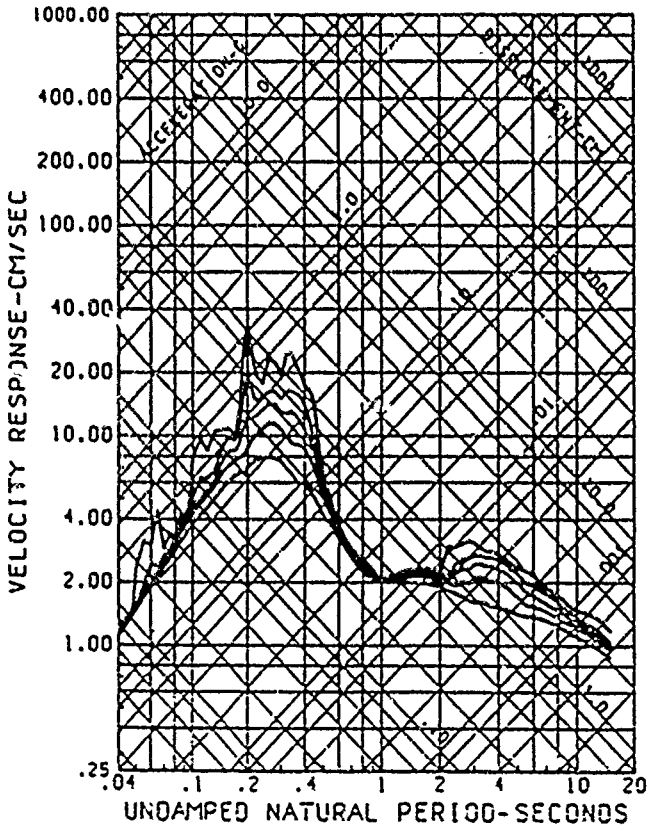
USGS OF 78-941

SEISMIC ENGINEERING
BRANCH/USGS
STONE CANYON GEOPH. OBSERV.
CRITICAL DAMPING
0.2.5.10.20 PERCENT

9/4/72.N87E

CAL 64



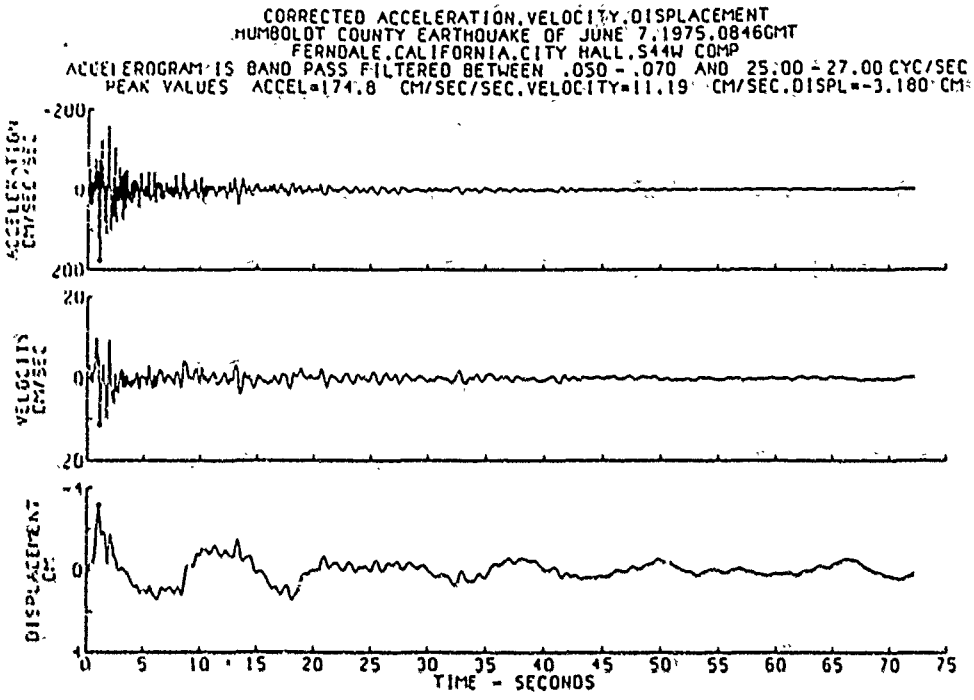


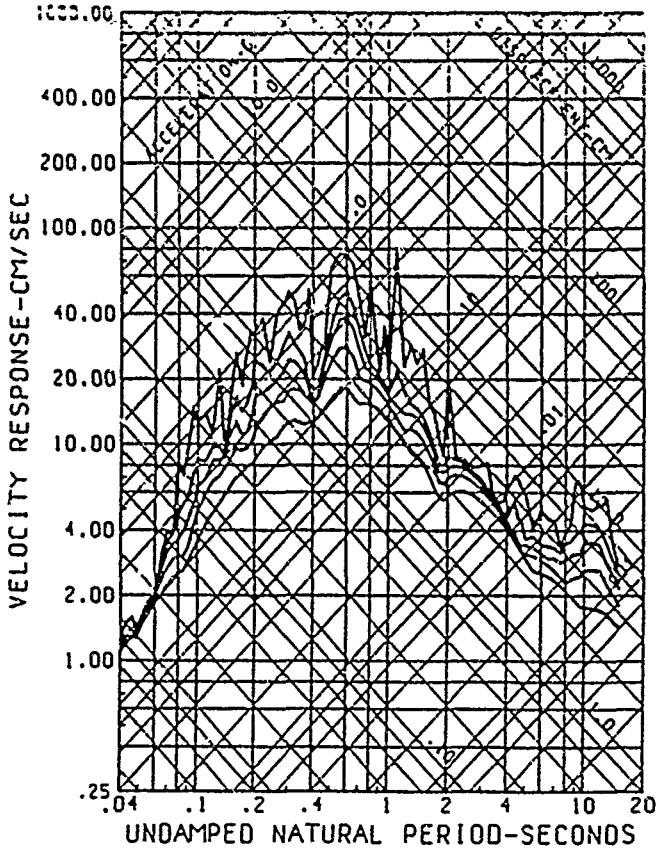
USGS OF 79-929

SEISMIC ENGINEERING
BRANCH/USGS
PETROLIA,CALIF,GEN. STORE
CRITICAL DAMPING
0,2,5,10,20 PERCENT

01/11/75,N75E

CAL 67



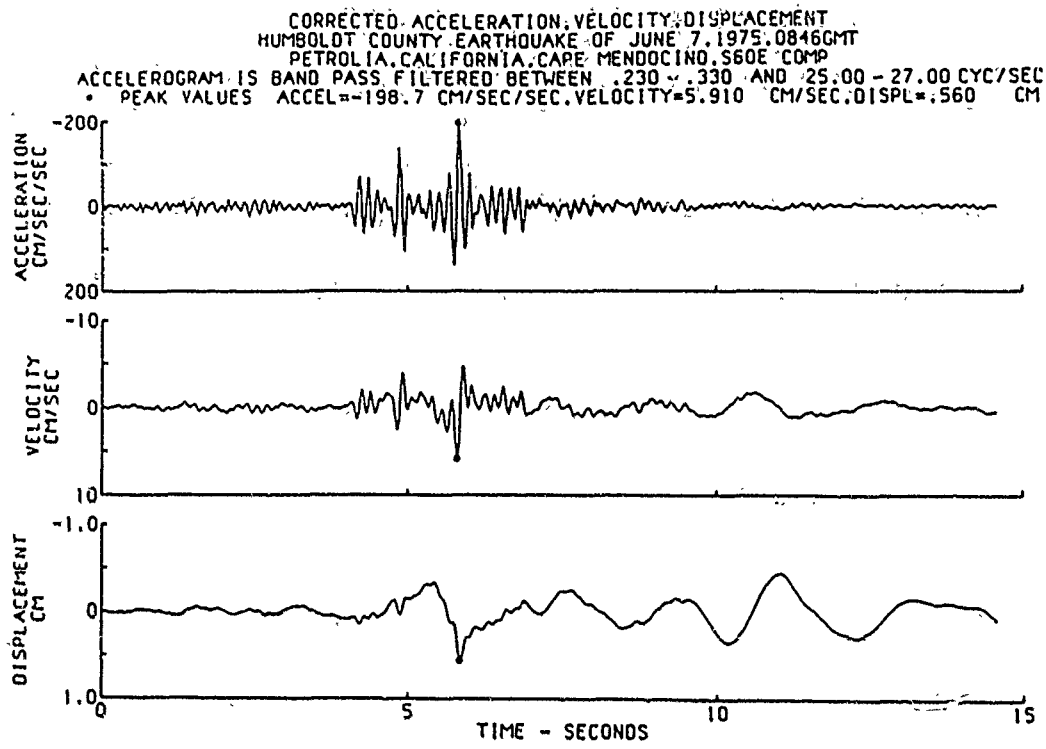


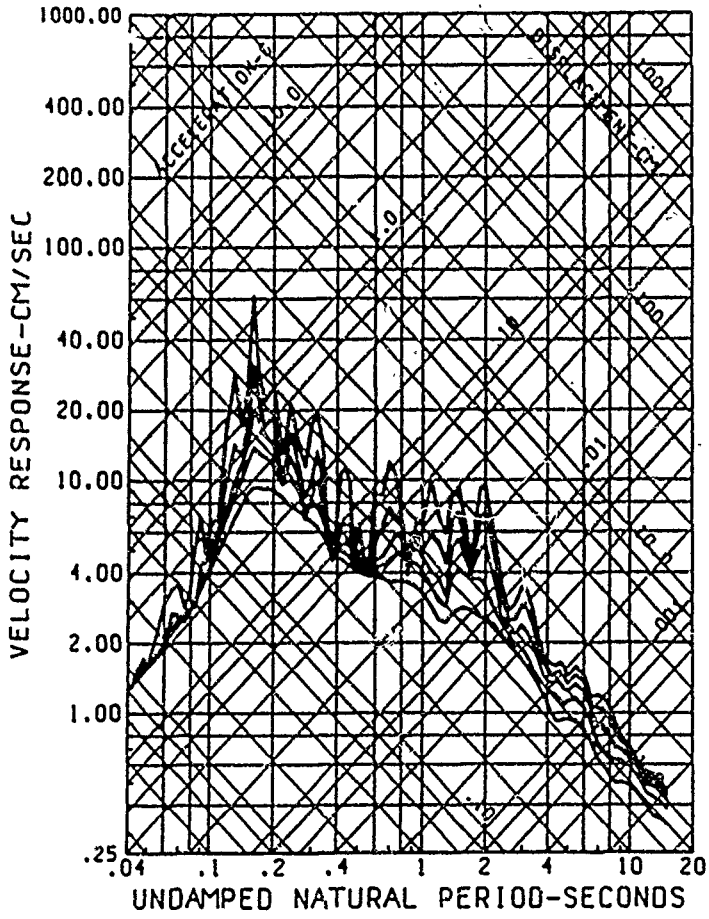
USGS OF 79-929

SEISMIC ENGINEERING
BRANCH/USGS
0846GMT,S44W
CRITICAL DAMPING
0,2,5,10,20 PERCENT

FERNDALE,CITY HALL,6/7/75

CAL 69



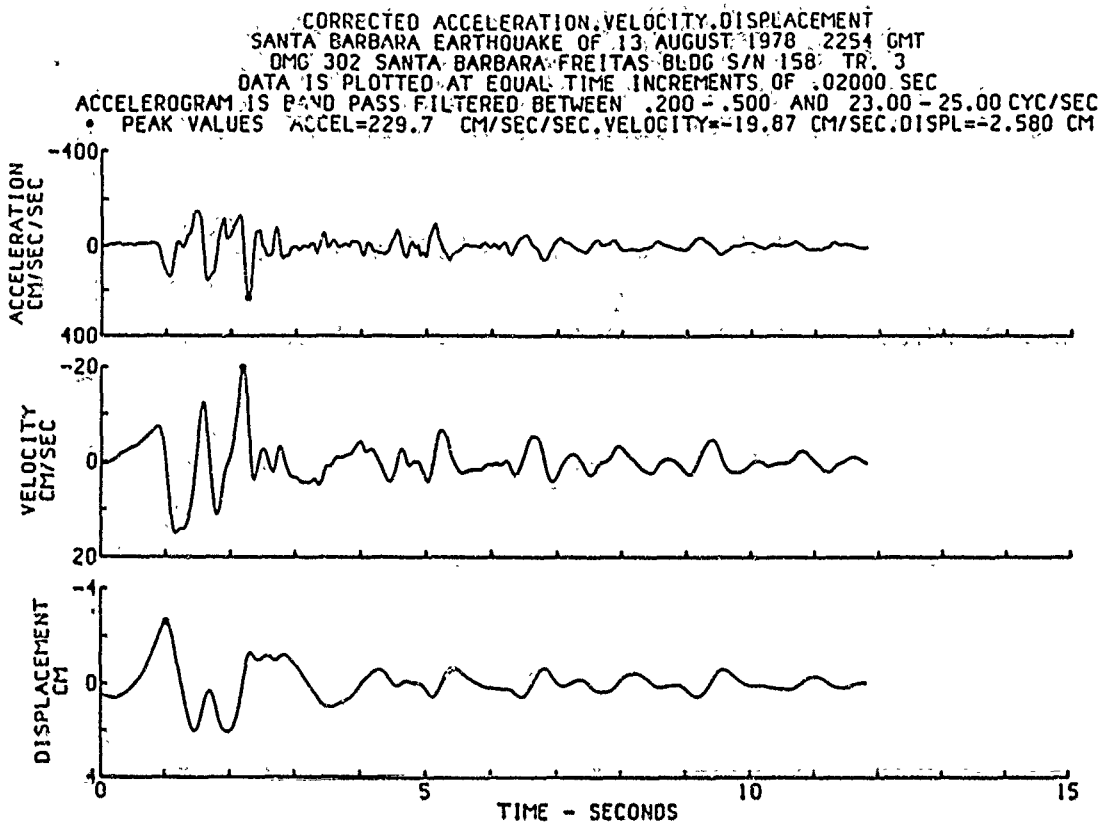


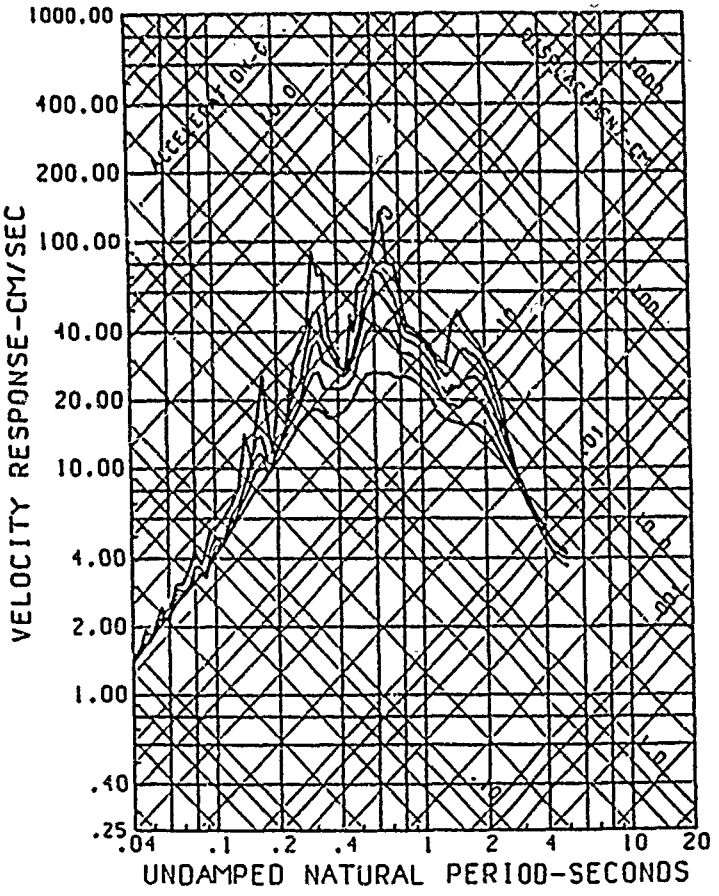
USGS OF 79-929

SEISMIC ENGINEERING
BRANCH/USGS
PETROLIA, CAL, CAPE MENDOCINO
CRITICAL DAMPING
0, 2, 5, 10, 20 PERCENT

6/7/75, S60E

CAL 70



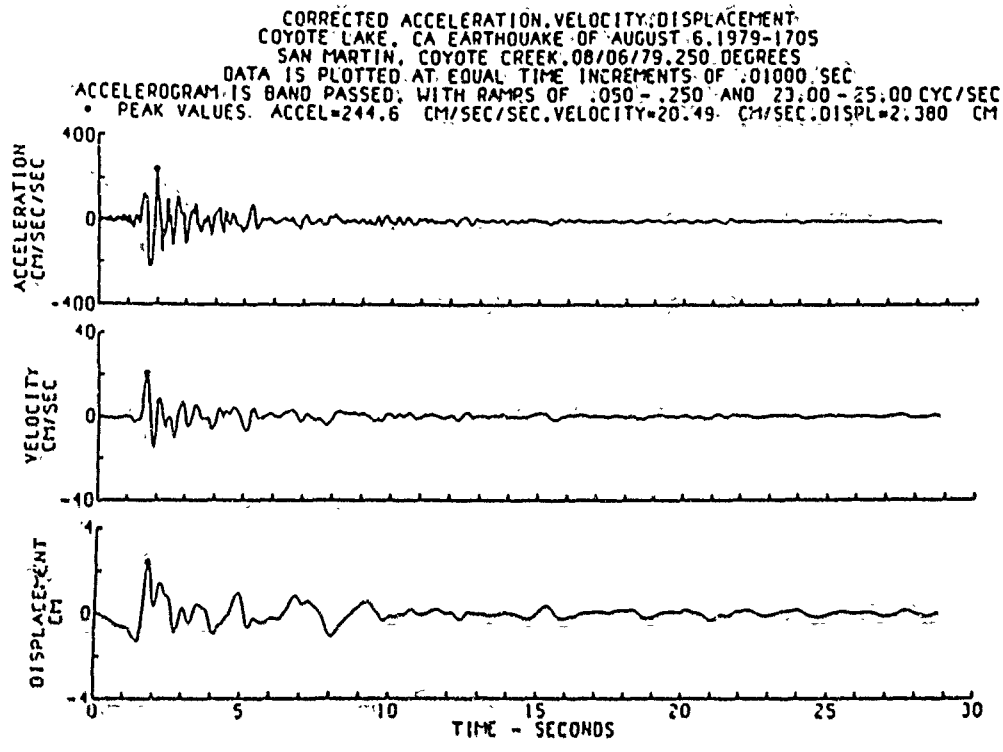


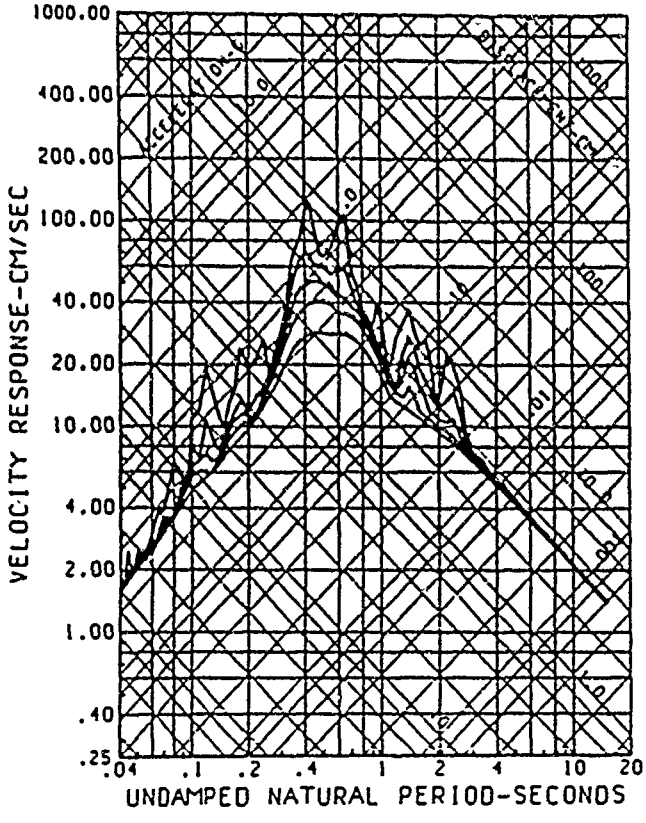
CDMG SR 144-2

THEOREM PROCEDURE
CONVOLUTION
BAND PASSED FROM
.200- .500 TO 23.00-25.00 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

GMT FREITAS BLDG TR 3
13 AUG 1978 2254

CAL 91





CDMG PR 24 USGS OF 81-42

SEISMIC ENGINEERING BRANCH/USGS

BAND PASSED FROM

.050- .250 TO 23.00-25.00 HZ

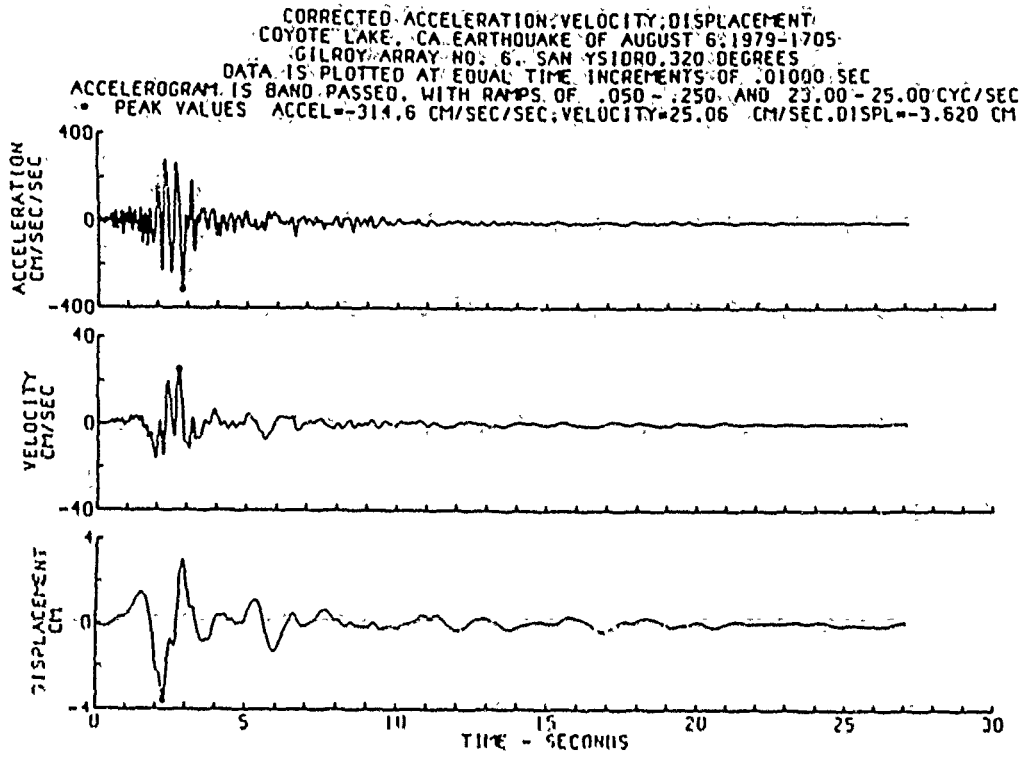
.250 DEGREES

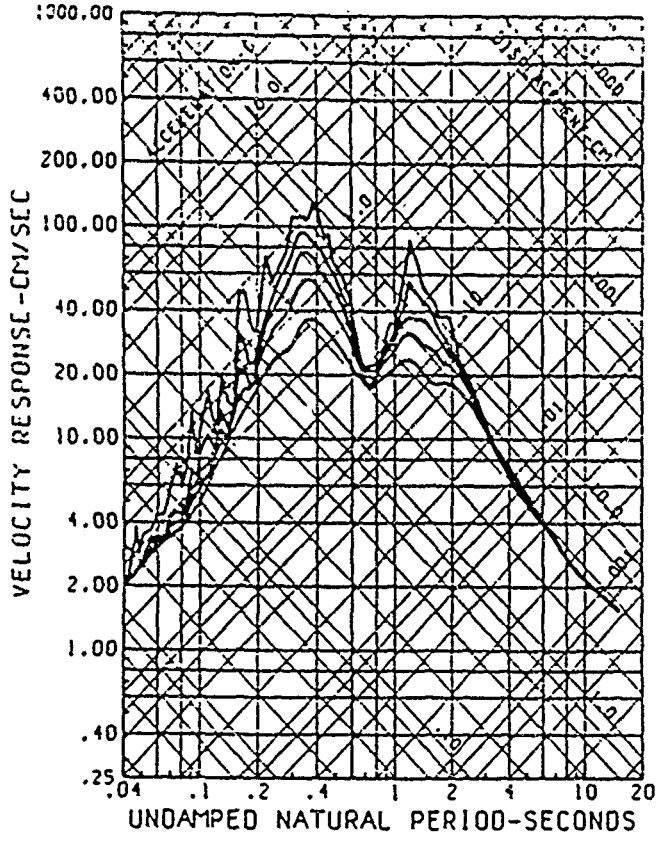
CRITICAL DAMPING

0,2,5,10,20 PERCENT

SAN MARTIN,08/06/79

CAL 99





CDMG PR 24 USGS OF 81-42

SEISMIC ENGINEERING BRANCH/USGS

BAND PASSED FROM

.050- .250 TO 23.00-25.00 HZ

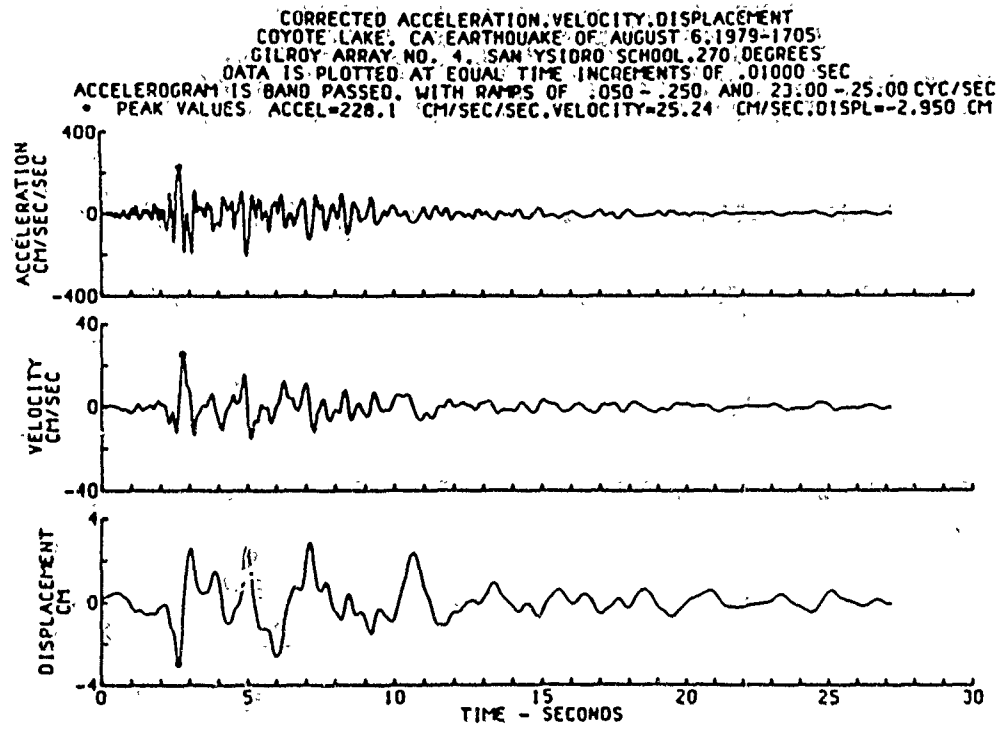
320 DEGREES

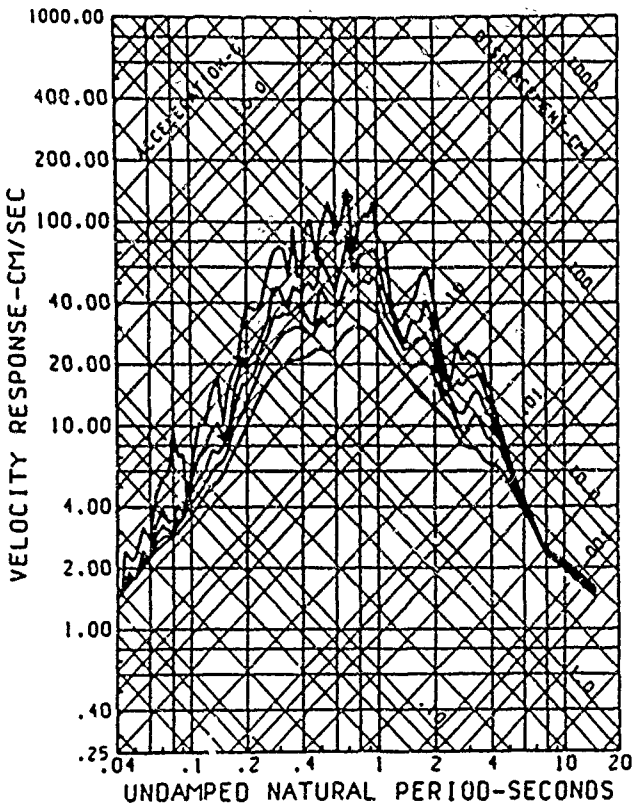
CRITICAL DAMPING

0,2,5,10,20 PERCENT

GILROY ARRAY NO. 6,08/06/79

CAL 101



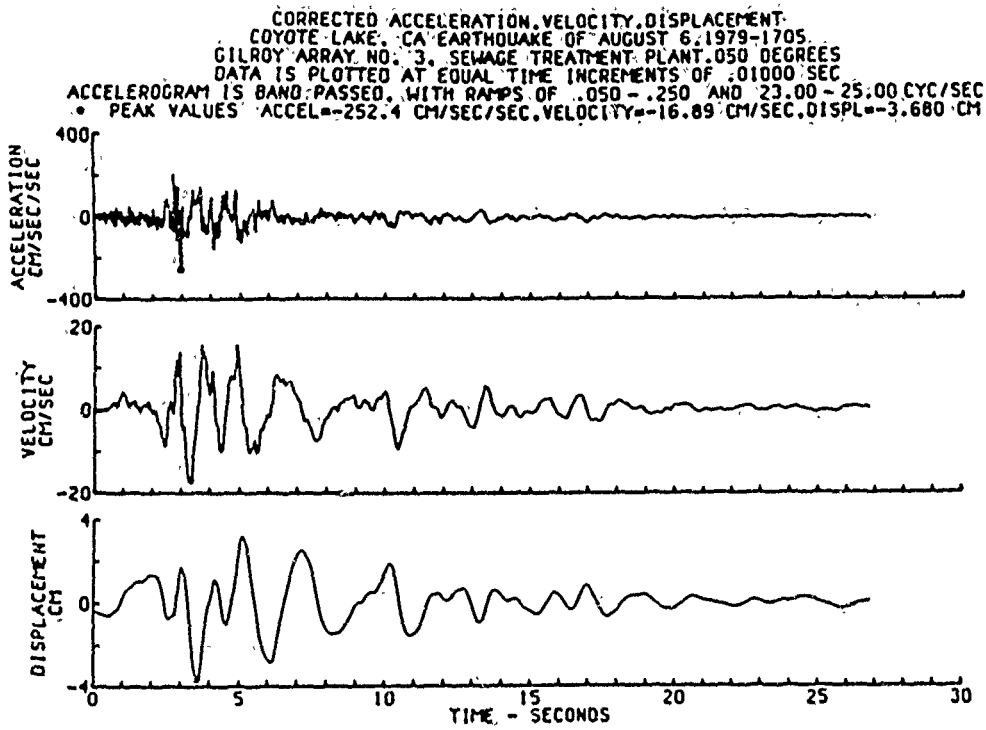


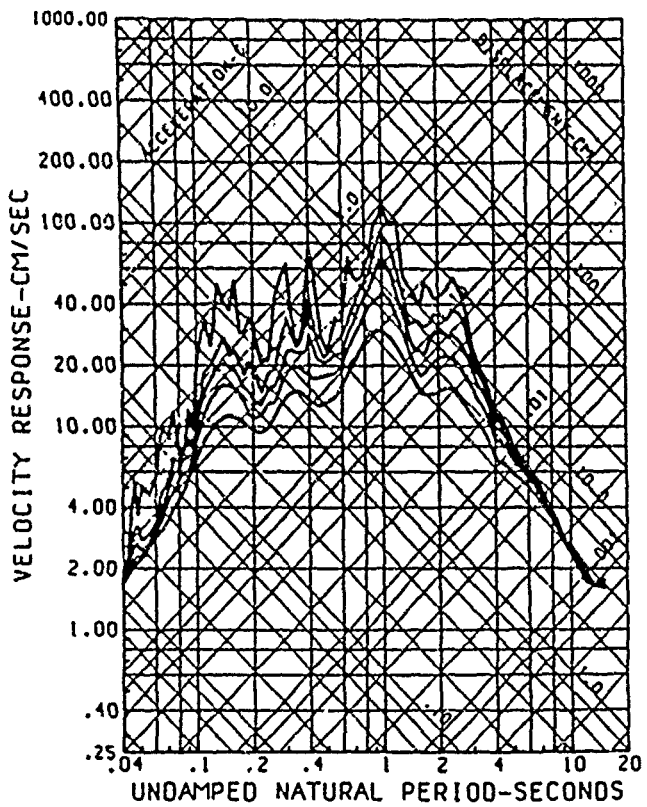
CDMG PR 24 USGS OF 81-42

SEISMIC ENGINEERING
BRANCH/USGS
BAND PASSED FROM
.050- .250 TO 23.00-25.00 HZ
270 DEGREES
CRITICAL DAMPING
0,2,5,10,20 PERCENT

GILROY ARRAY NO. 4,08/06/79

CAL 103





CDMG PR 24 USGS OF 81-42

SEISMIC ENGINEERING BRANCH/USGS

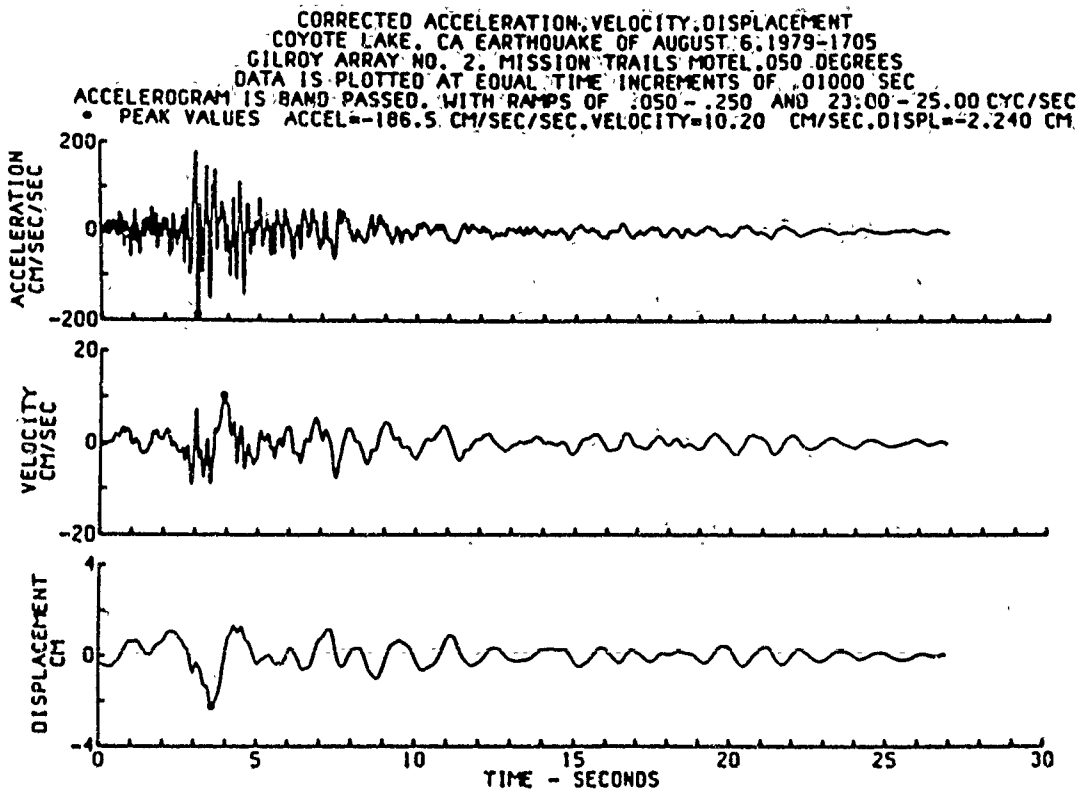
BAND PASSED FROM .050- .250 TO 23.00-25.00 HZ

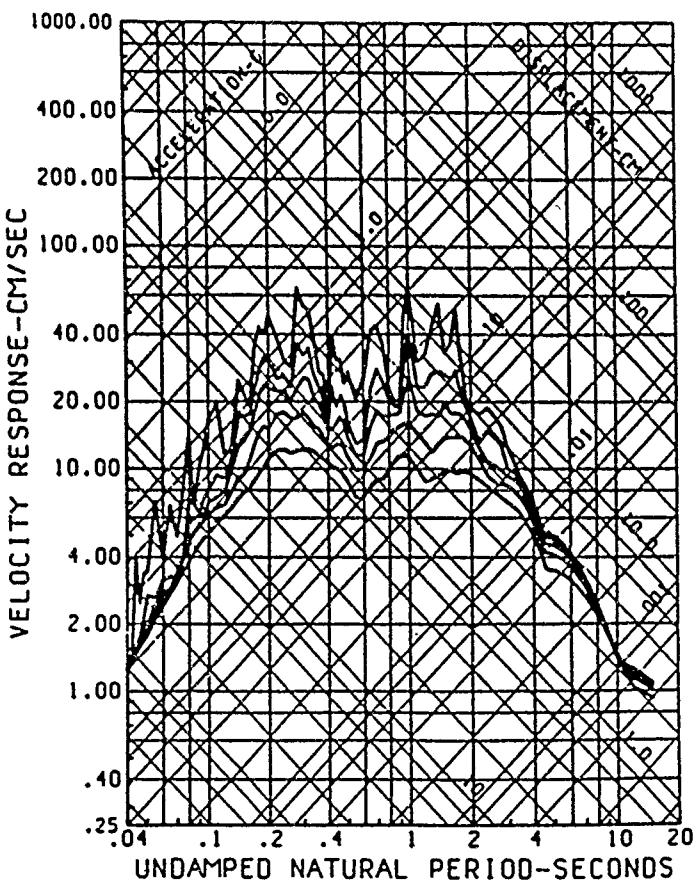
050 DEGREES

CRITICAL DAMPING 0.2.5.10.20 PERCENT

GILROY ARRAY NO. 3,08/06/79

CAL 104



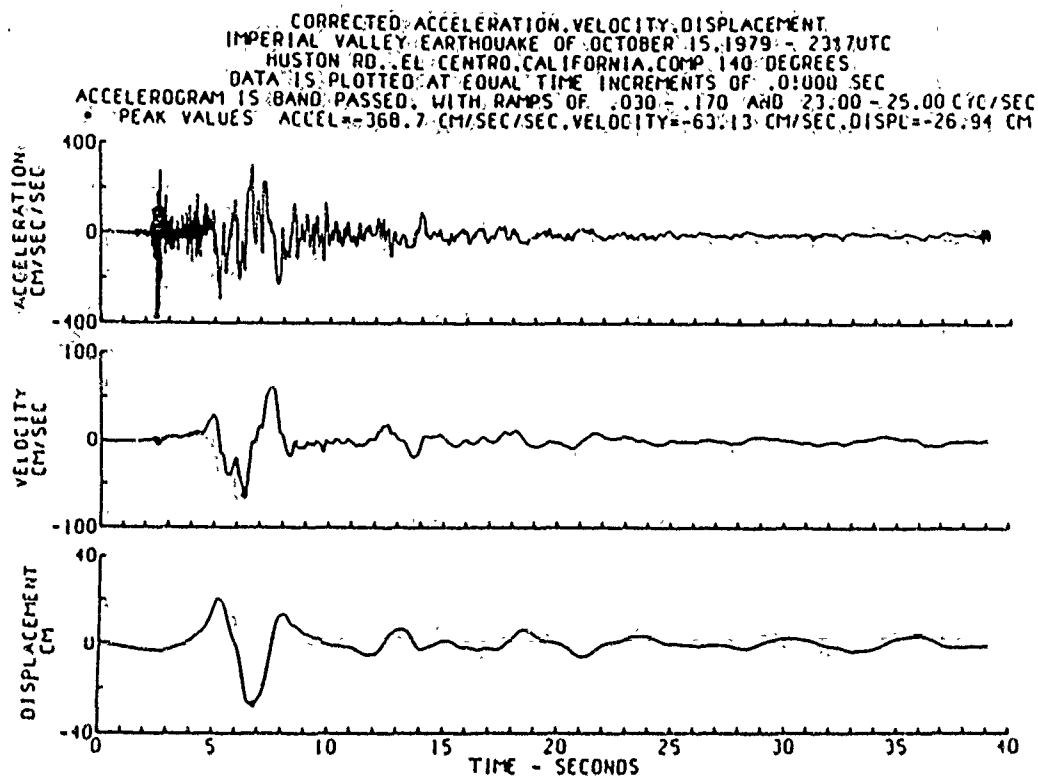


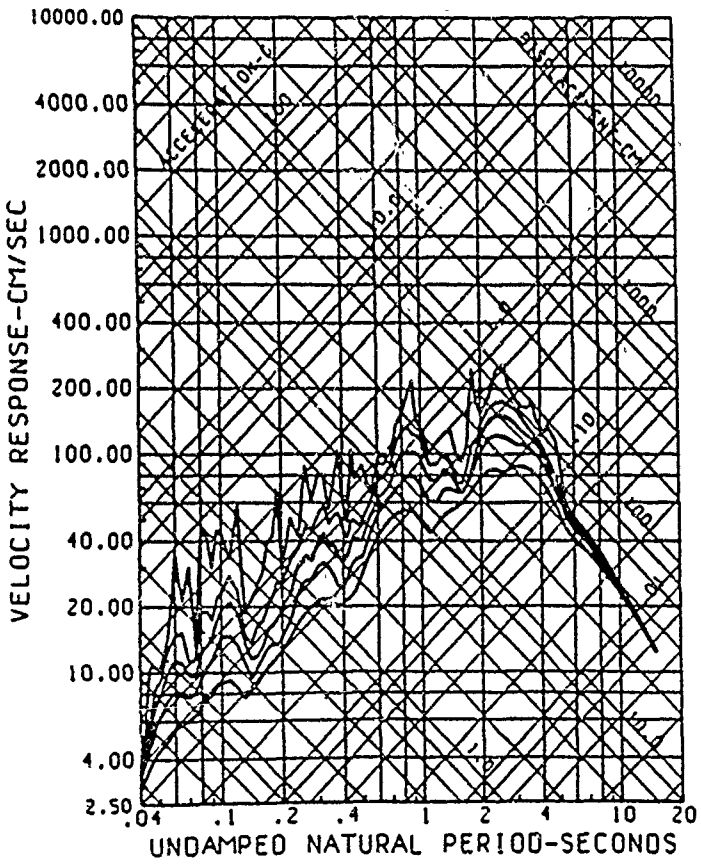
CDMG PR 24 USGS OF 81-42

SEISMIC ENGINEERING
BRANCH/USGS
BAND PASSED FROM
.050- .250 TO 23.00-25.00 HZ
050 DEGREES
CRITICAL DAMPING
0,2,5,10,20 PERCENT

GILROY ARRAY NO. 2,08/06/79

CAL 107



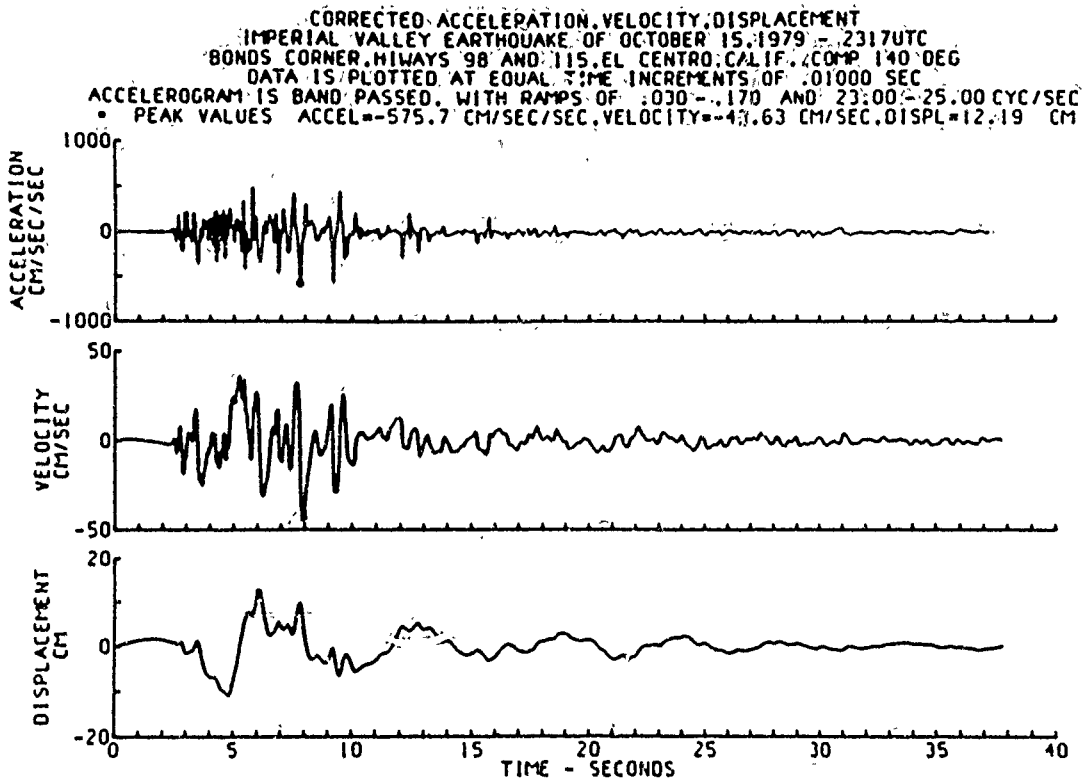


USGS OF 80-703

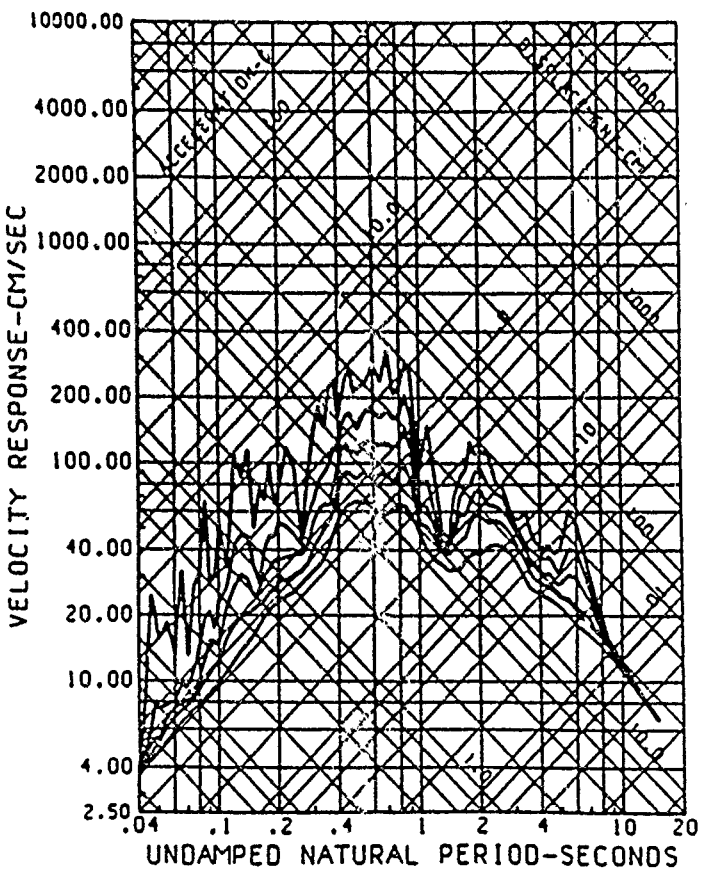
SEISMIC ENGINEERING
BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
140DEG
CRITICAL DAMPING
0,2,5,10,20 PERCENT

EL CENTRO,ARRAY 6
10/15/79,2317

CAL 111



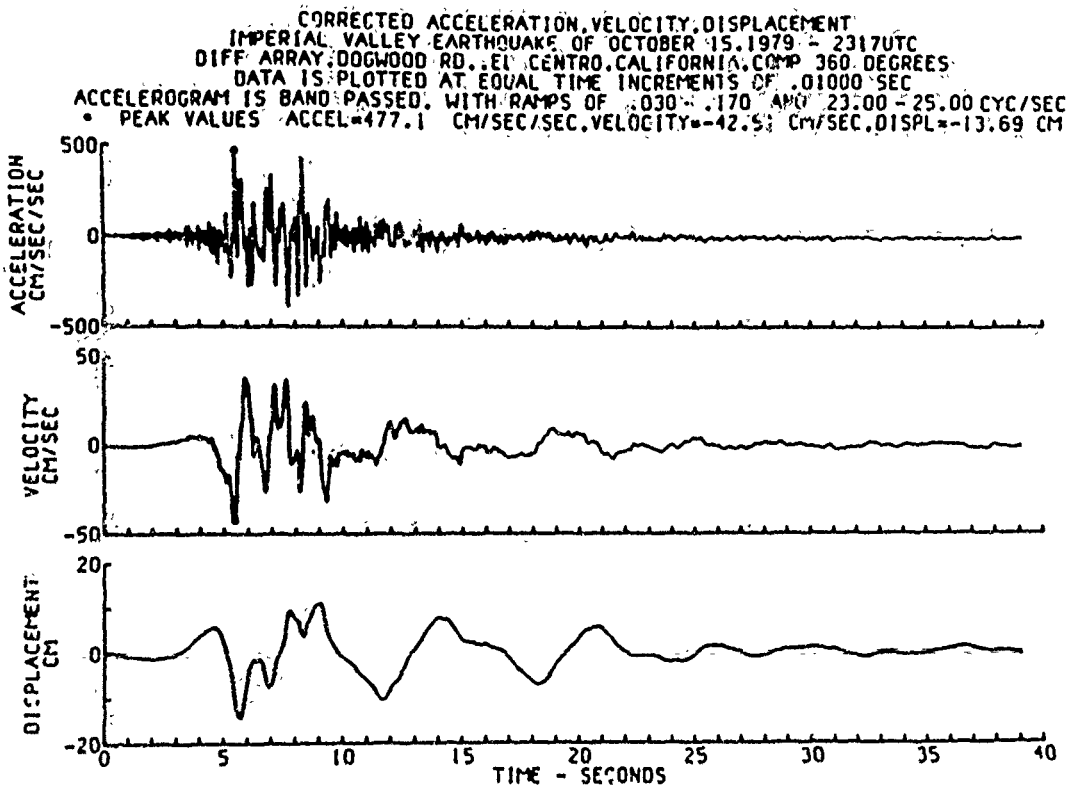
USGS OF 80-703

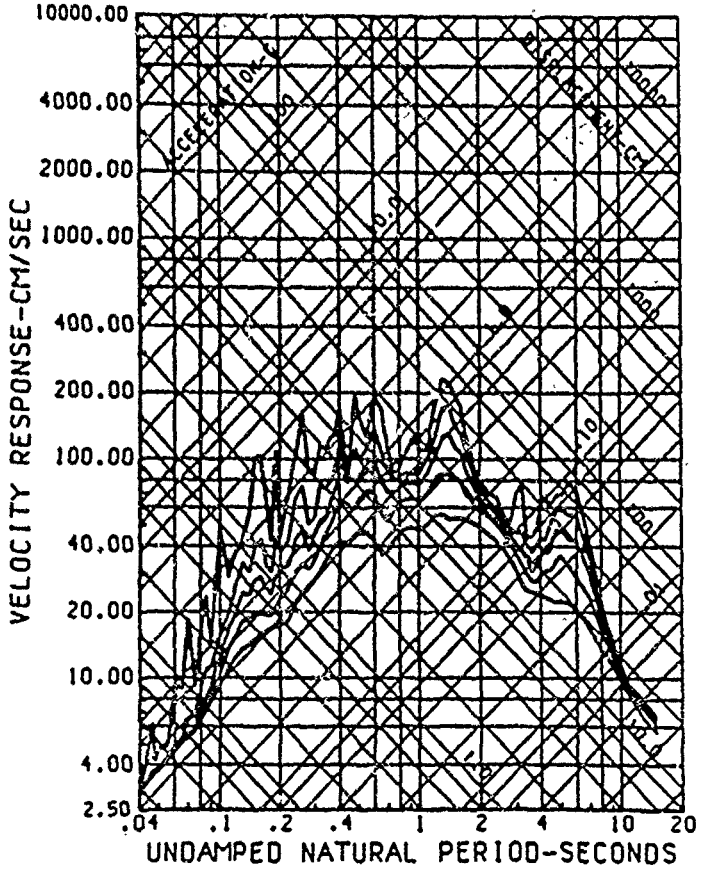


SEISMIC ENGINEERING BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
140 DEG
CRITICAL DAMPING
0,2,5,10,20 PERCENT

EL CENTRO,BONDS CORNER
10/15/79

CAL 115



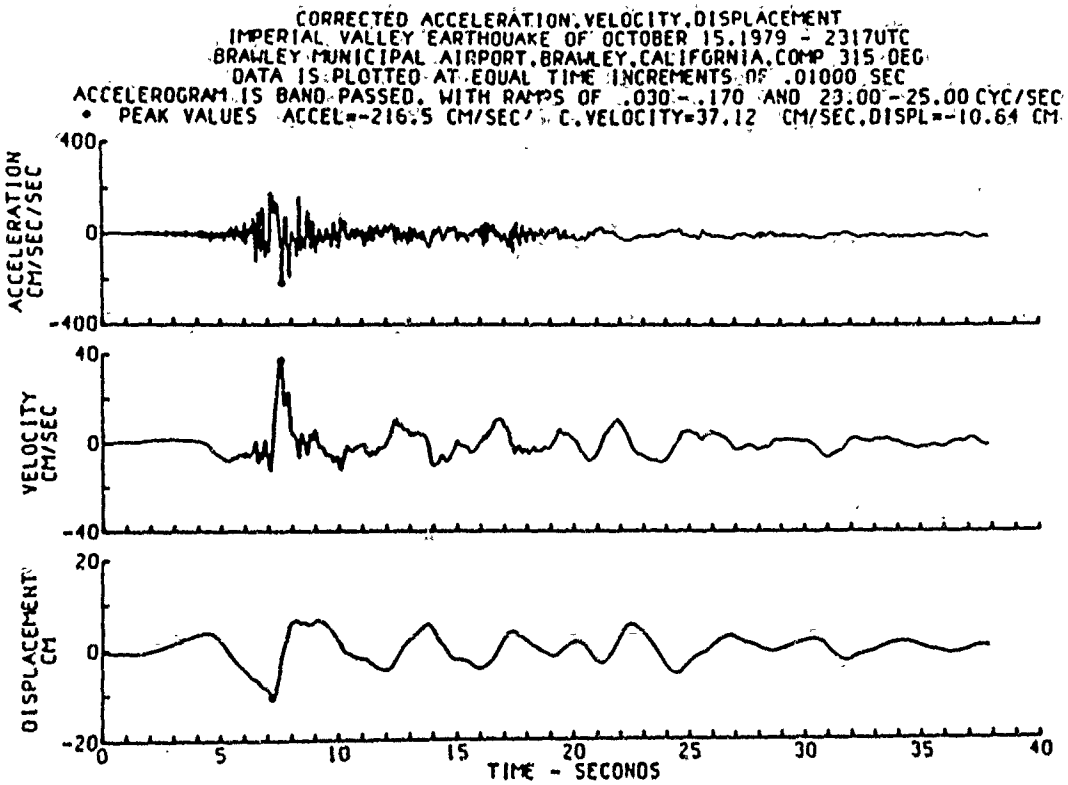


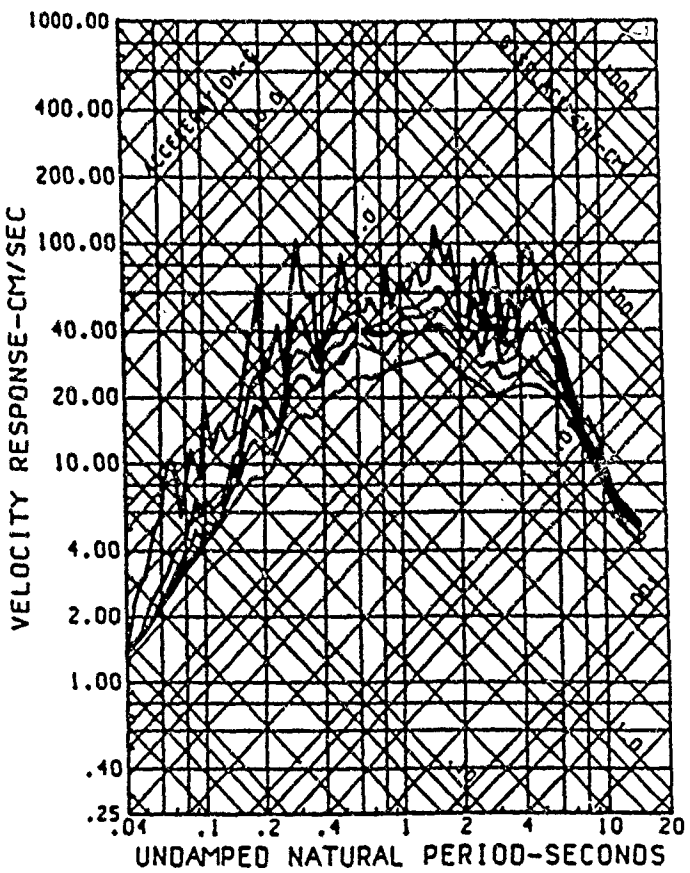
USGS OF 80-703

SEISMIC ENGINEERING BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
360DEG
CRITICAL DAMPING
0,2,5,10,20 PERCENT

EL CENTRO,DIFF ARR.
10/15/79,2317

CAL 120



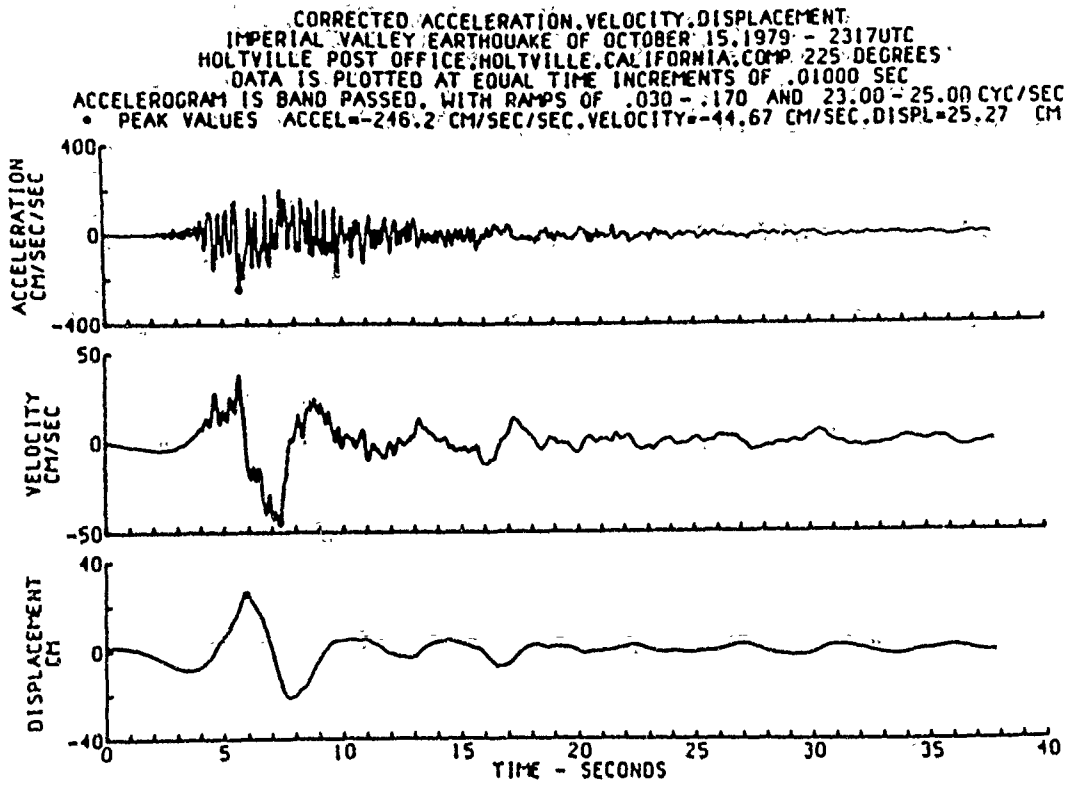


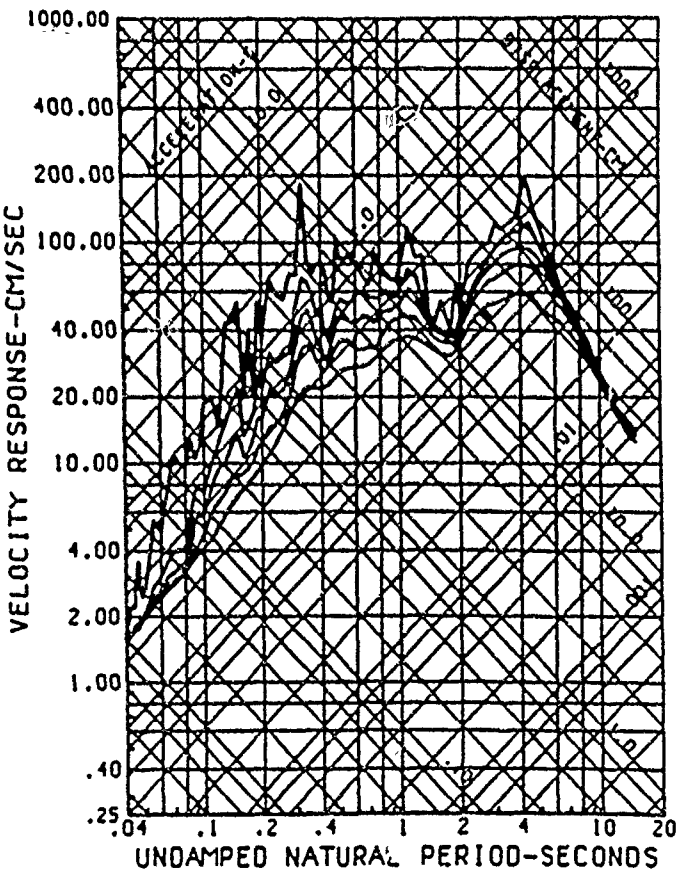
USGS OF 80-703

SEISMIC ENGINEERING
BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
315 DEG
CRITICAL DAMPING
0,2,5,10,20 PERCENT

BRAWLEY,BRAWLEY AIRPORT
10/15/79

CAL 124



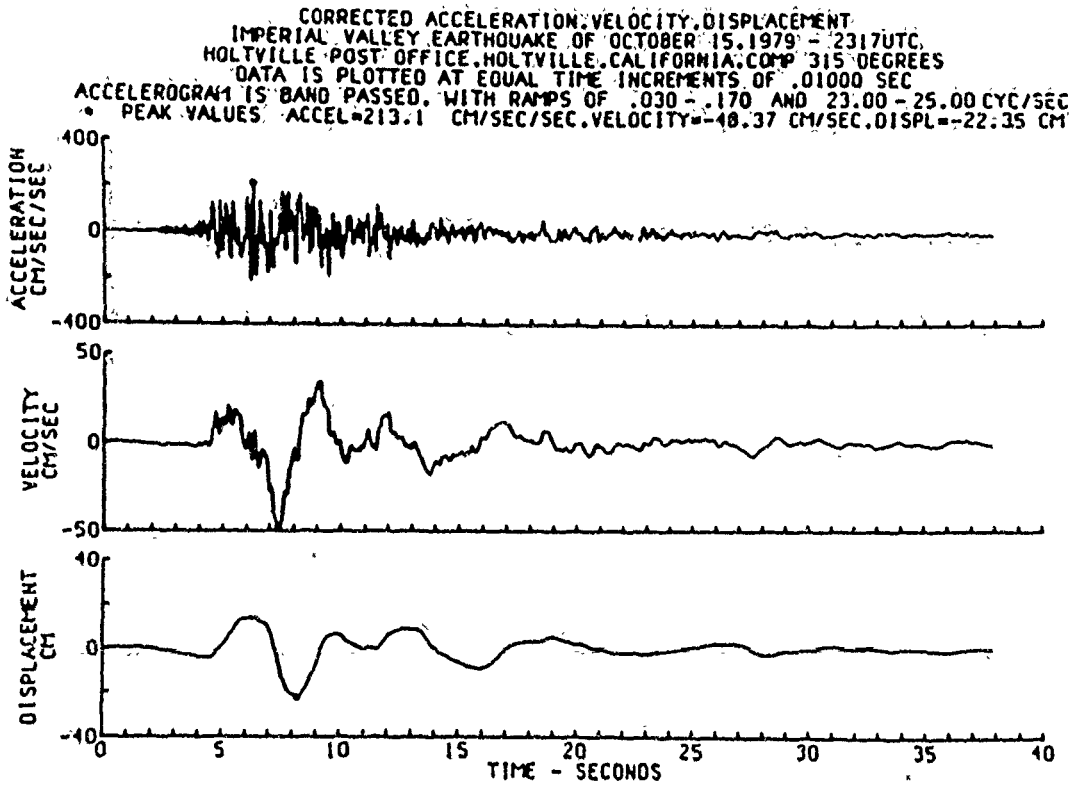


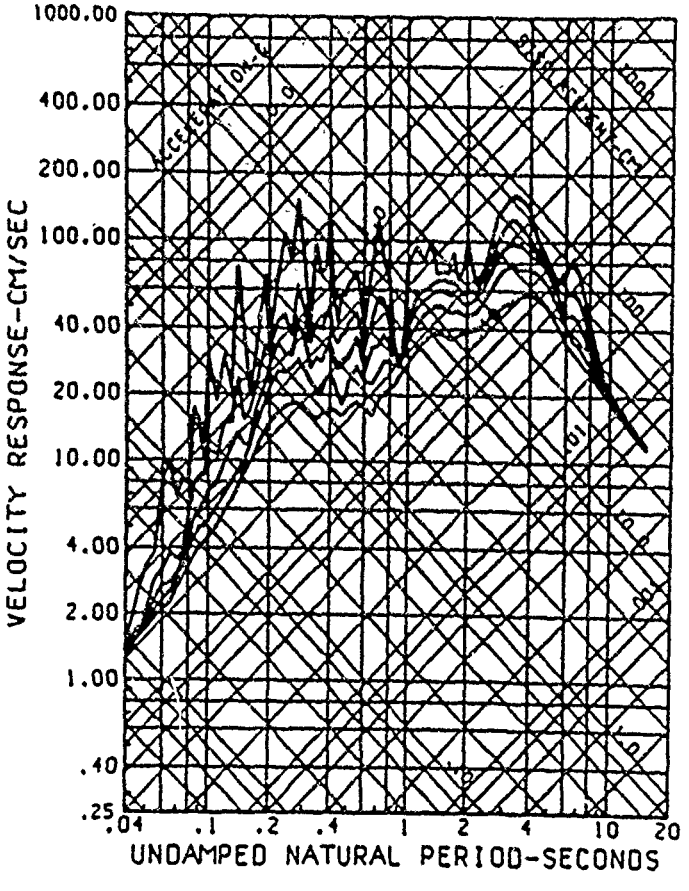
USGS OF 80-703

SEISMIC ENGINEERING
BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
225 DEG
CRITICAL DAMPING
0.2.5.10.20 PERCENT

HOLTVILLE POST OFFICE
10/15/79

CAL 126



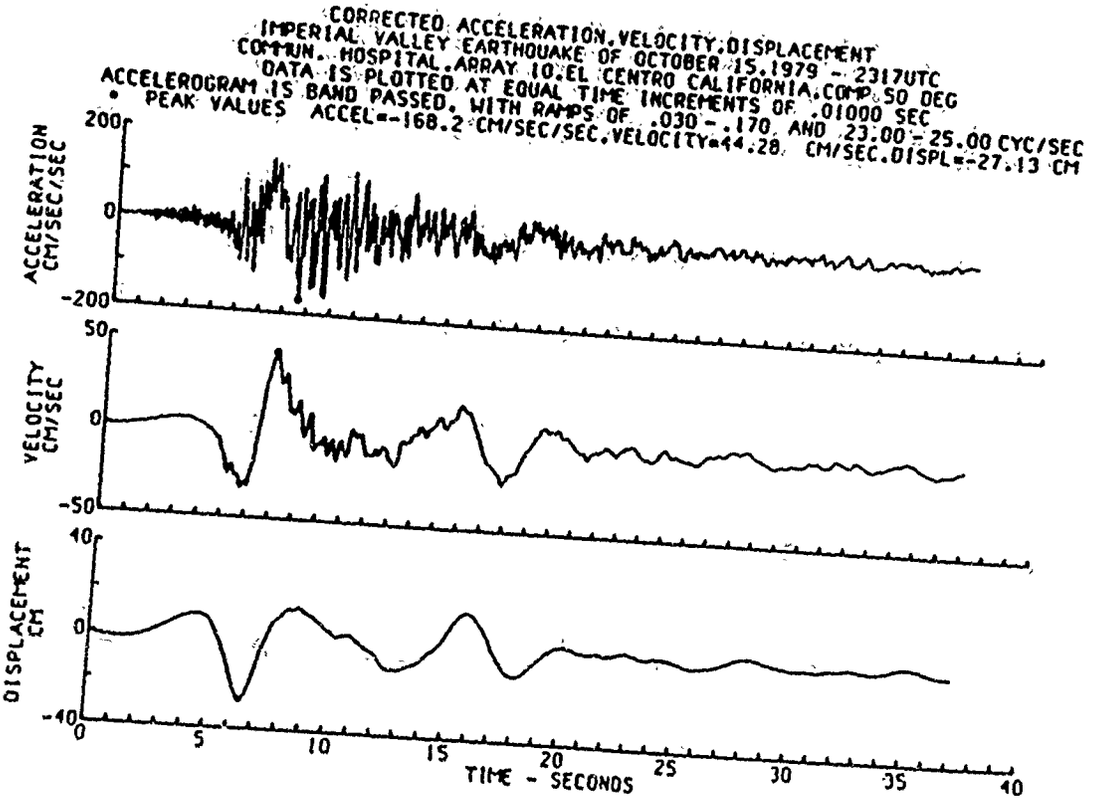


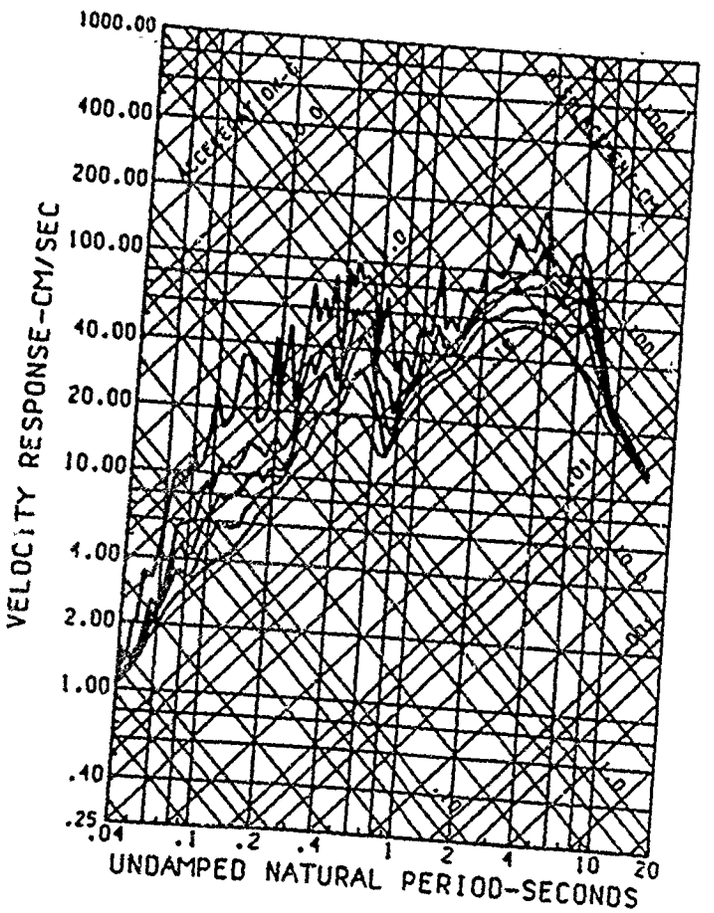
USGS OF 80-703

SEISMIC ENGINEERING BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
315 DEG
CRITICAL DAMPING
0.2.5.10.20 PERCENT

HOLTVILLE POST OFFICE,10/15/79

CAL 127



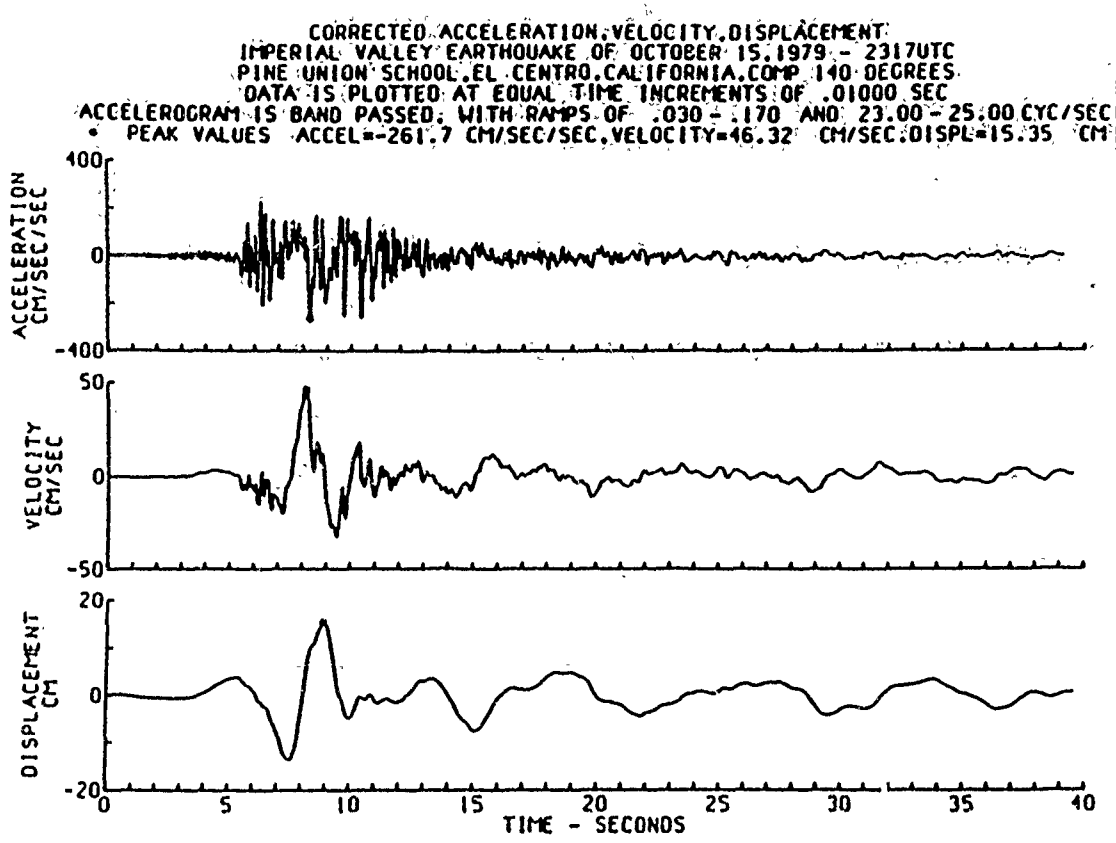


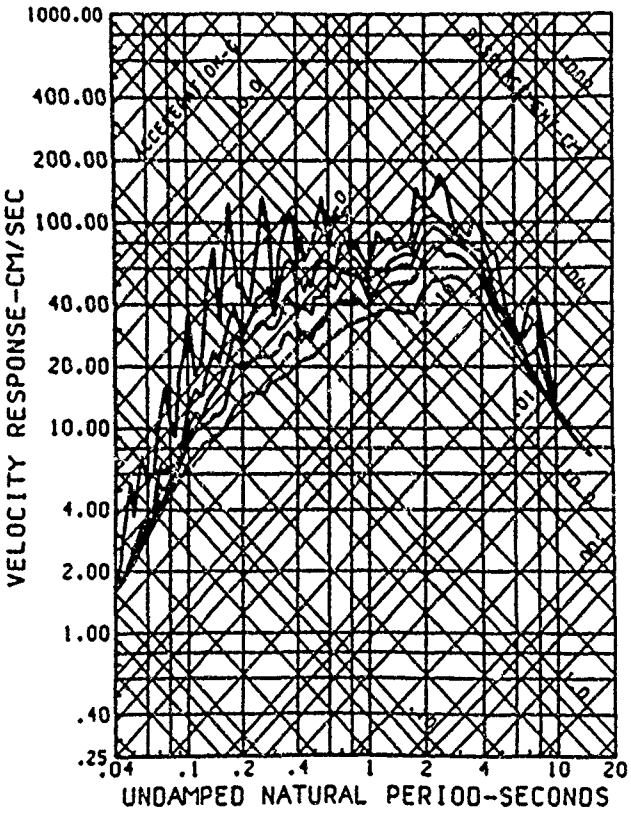
USGS OF 80-703

SEISMIC ENGINEERING BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
2317.50 DEG
CRITICAL DAMPING
0.2.5.10.20 PERCENT

EL CENTRO,ARRAY 10,10/15/79

CAL 129



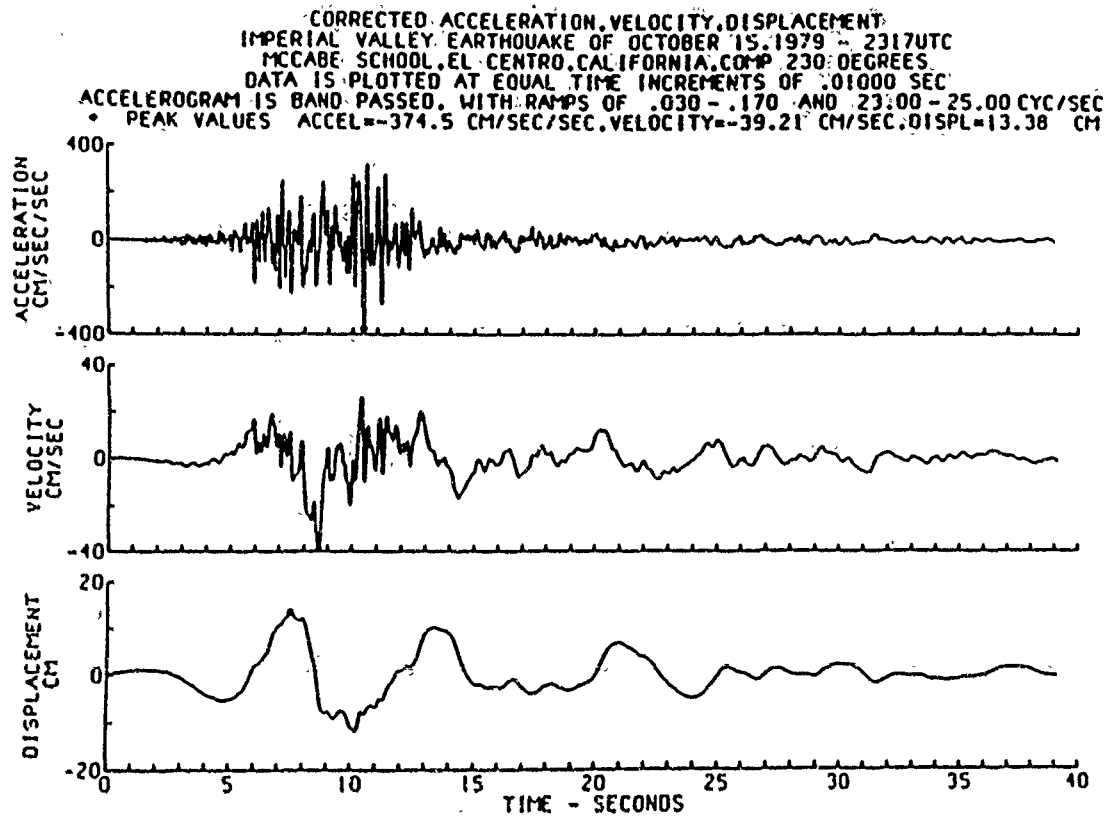


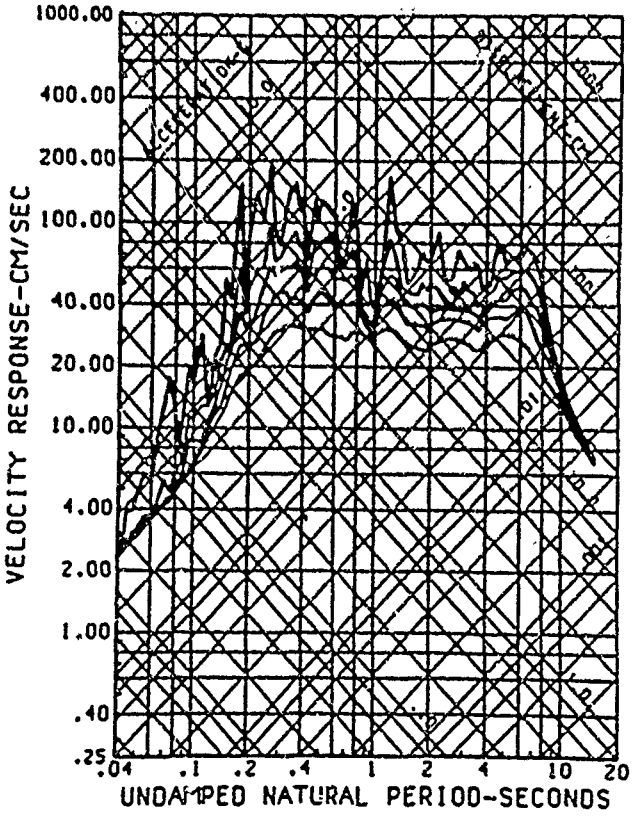
USGS OF 80-703

SEISMIC ENGINEERING BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
140DEG
CRITICAL DAMPING
0,2,5,10,20 PERCENT

EL CENTRO,ARRAY 3
10/15/79,2317

CAL 134



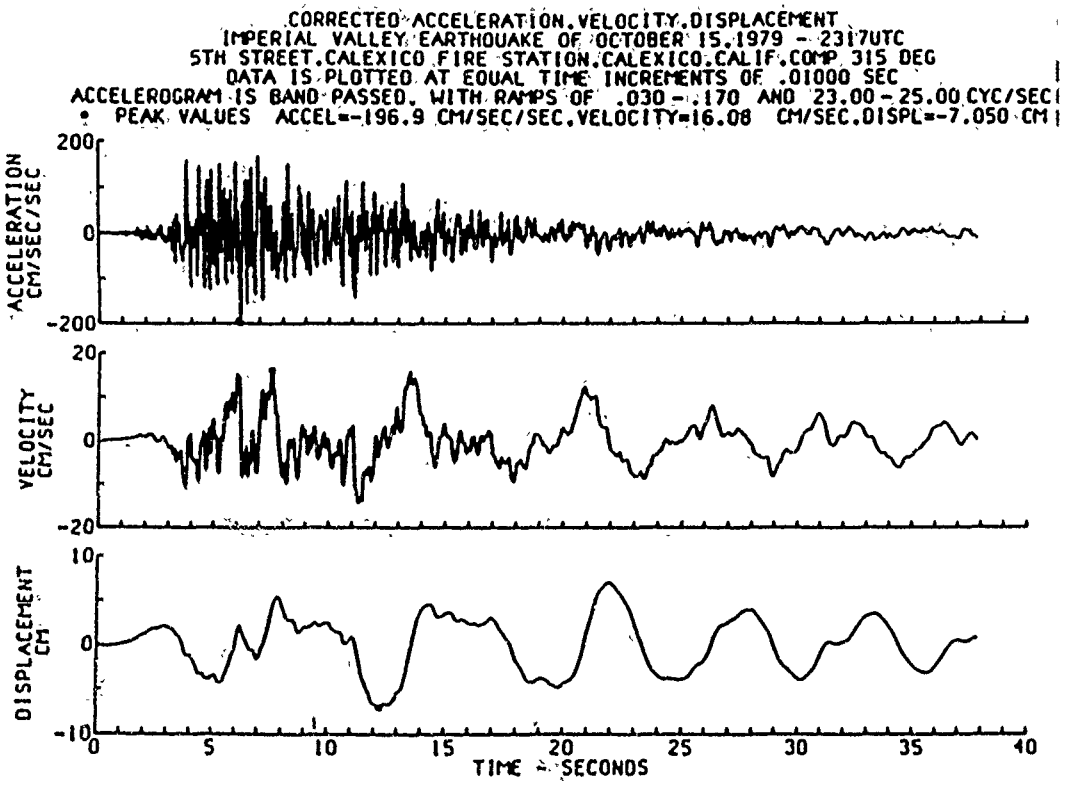


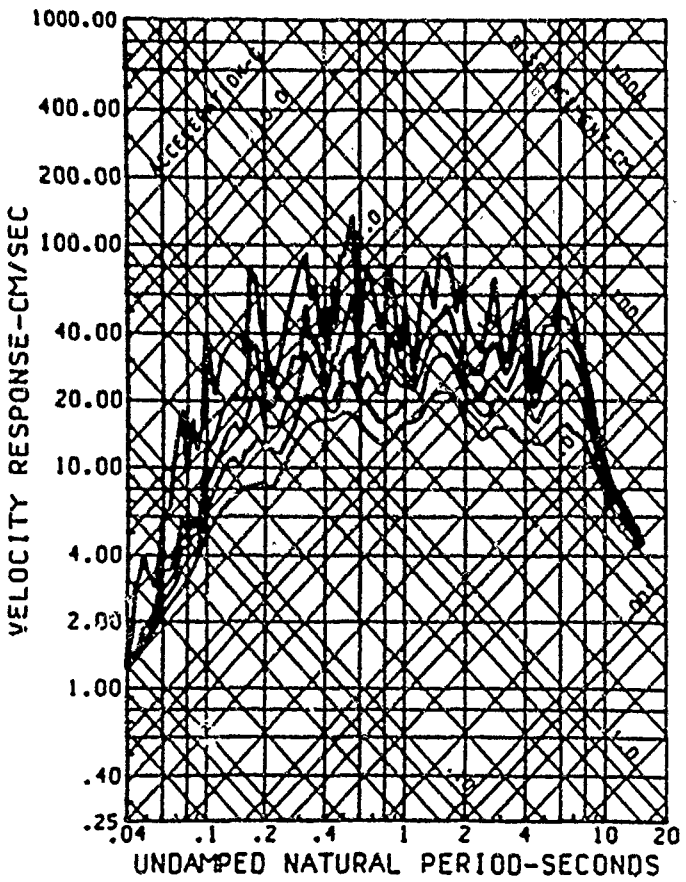
USGS OF 80-703

SEISMIC ENGINEERING BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
230DEG
CRITICAL DAMPING
0.2.5.10.20 PERCENT

EL CENTRO,ARRAY 11
10/15/79,2317

CAL 132



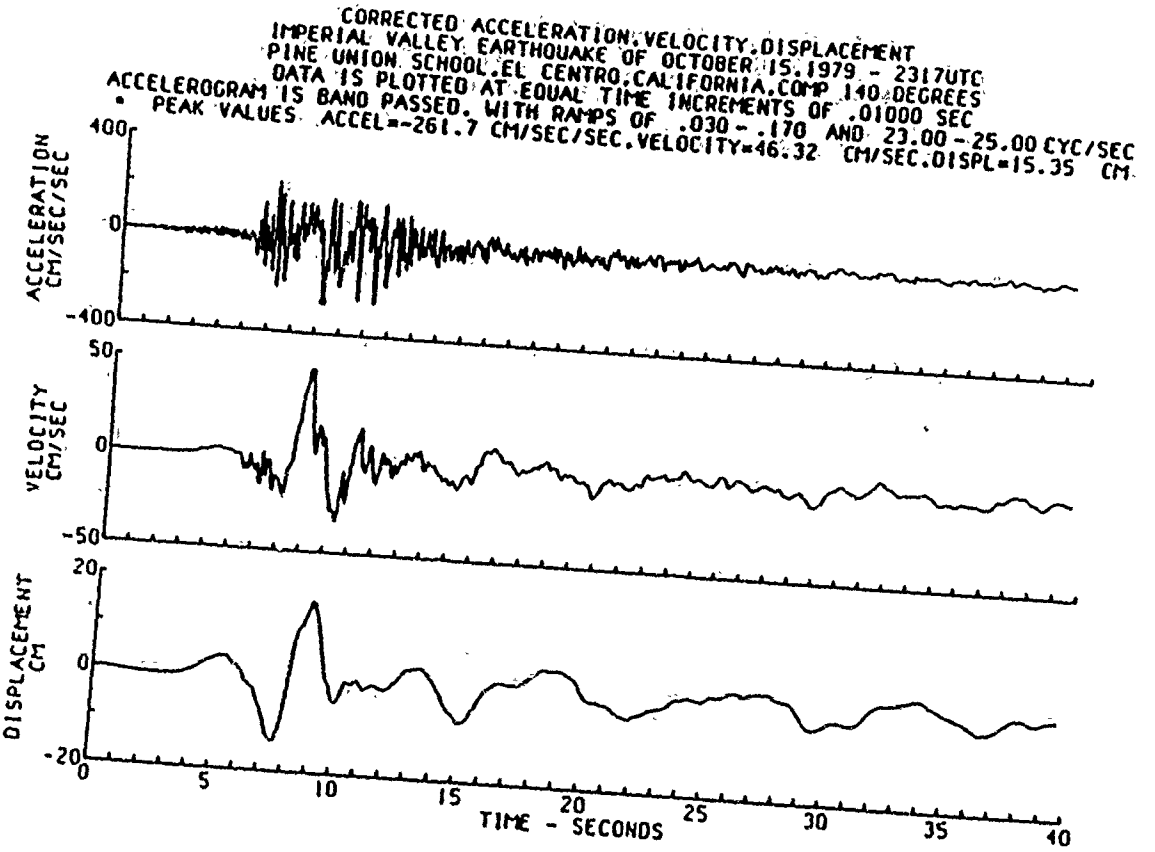


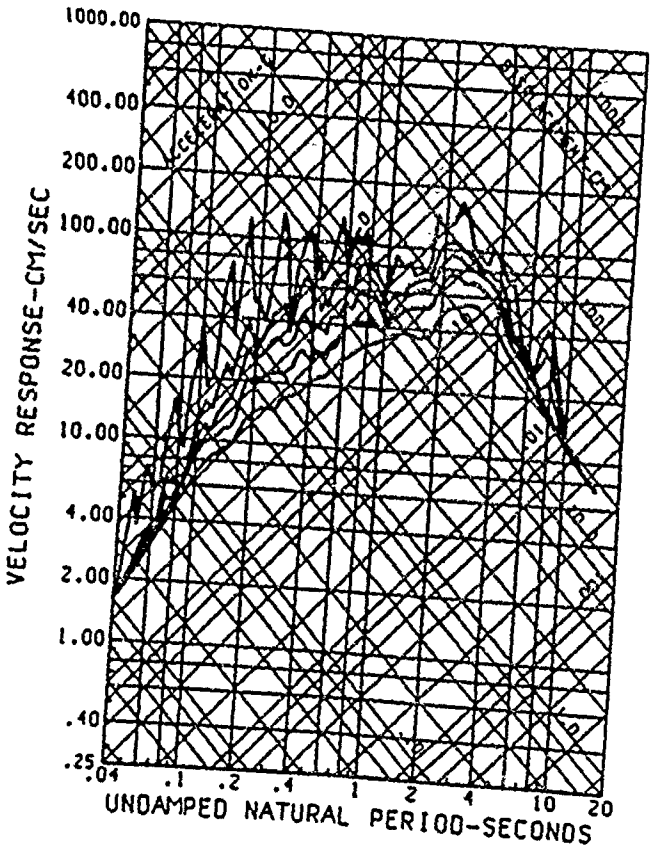
USGS OF 80-703

SEISMIC ENGINEERING BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
315 DEG
CRITICAL DAMPING
0.2.5.10.20 PERCENT

CALEXICO FIRE STATION
10/15/79

CAL 131



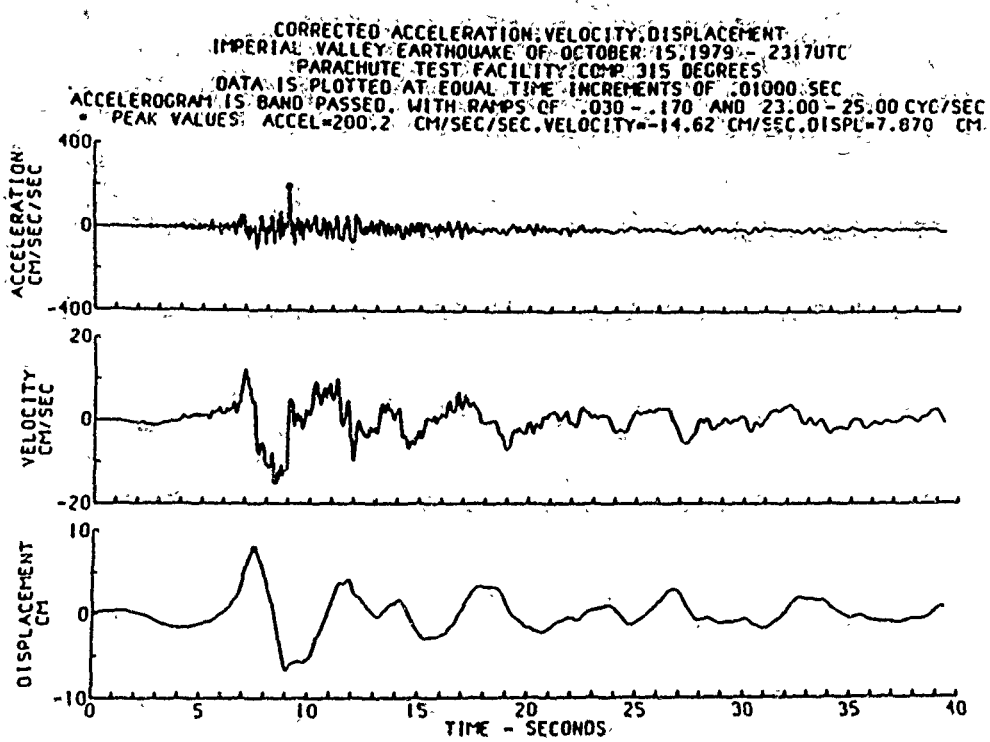


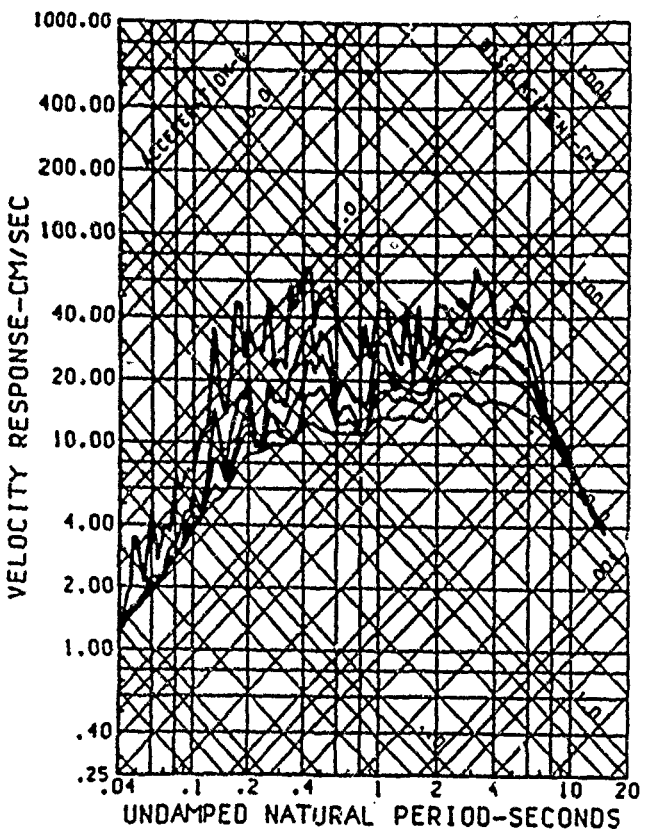
USGS OF 80-703

SEISMIC ENGINEERING BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
140DEG
CRITICAL DAMPING
0.2.5.10.20 PERCENT

EL CENTRO.ARRAY 3
10/15/79.2317

CAL 134



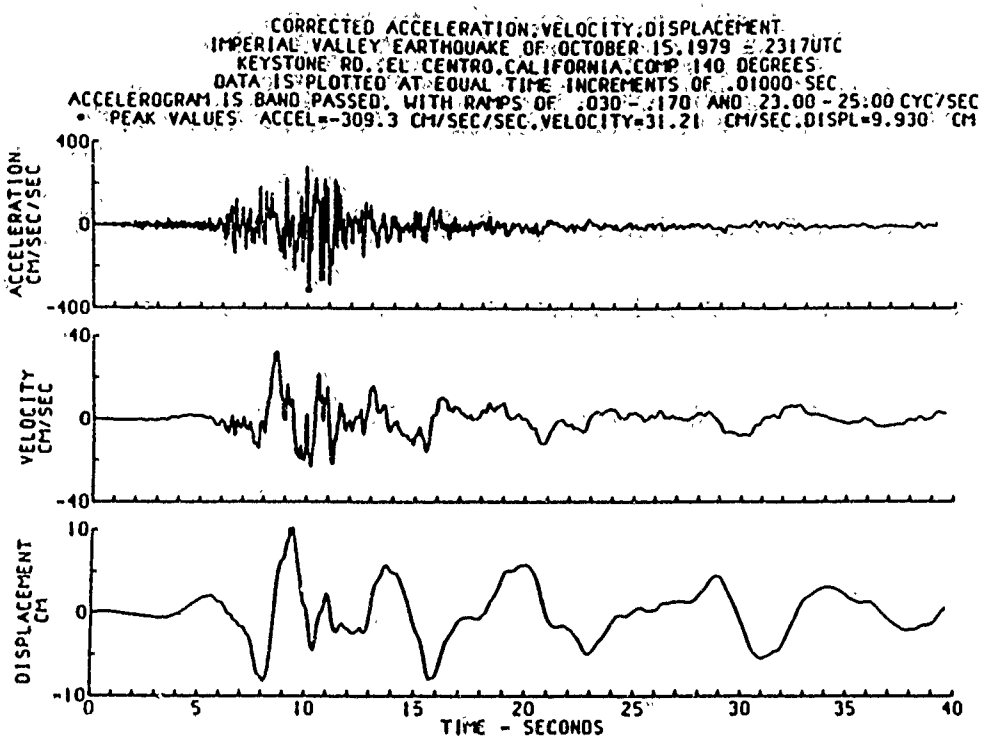


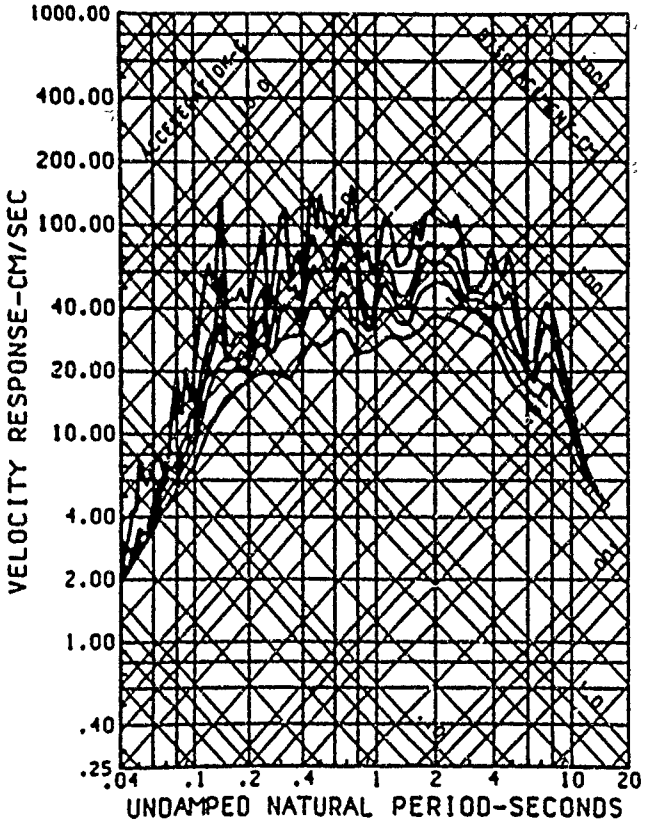
USGS OF 80-703

SEISMIC ENGINEERING
BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT
315DEG

PARACHUTE TST FACL.
10/15/79,2317

CAL 136



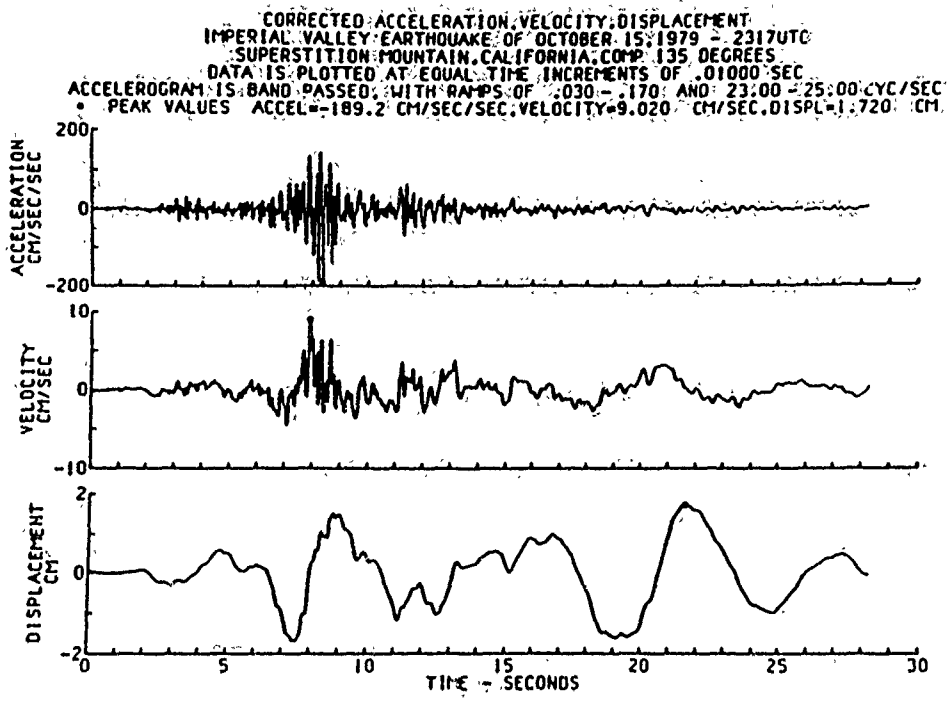


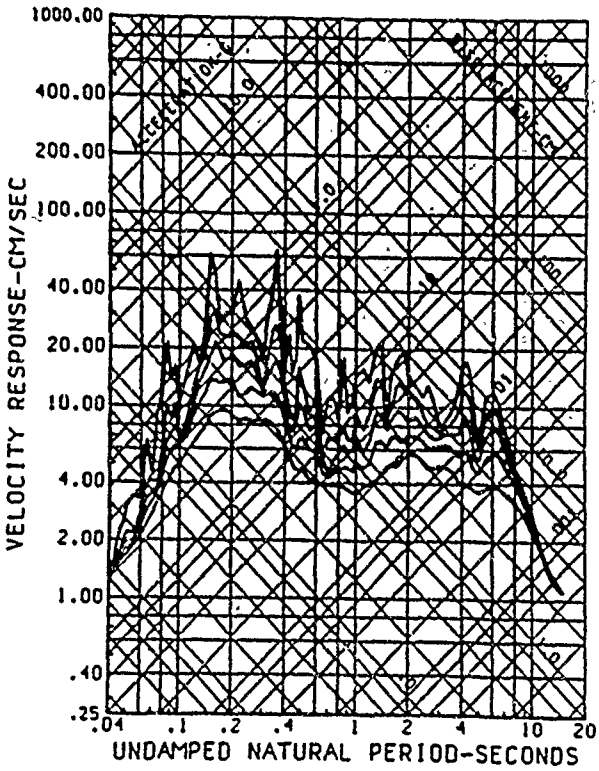
USGS OF 80-703

SEISMIC ENGINEERING
BRANCH/USGS
BAND PASSED FROM
.030- .170 TO 23.00-25.00 HZ
140DEG
CRITICAL DAMPING
0,2,5,10,20 PERCENT

EL CENTRO,ARRAY
2,10/15/79,2317

CAL 138





USGS OF 80-703

SEISMIC ENGINEERING BRANCH/USGS

BAND PASSED FROM

.030- .170 TO 23.00-25.00 HZ

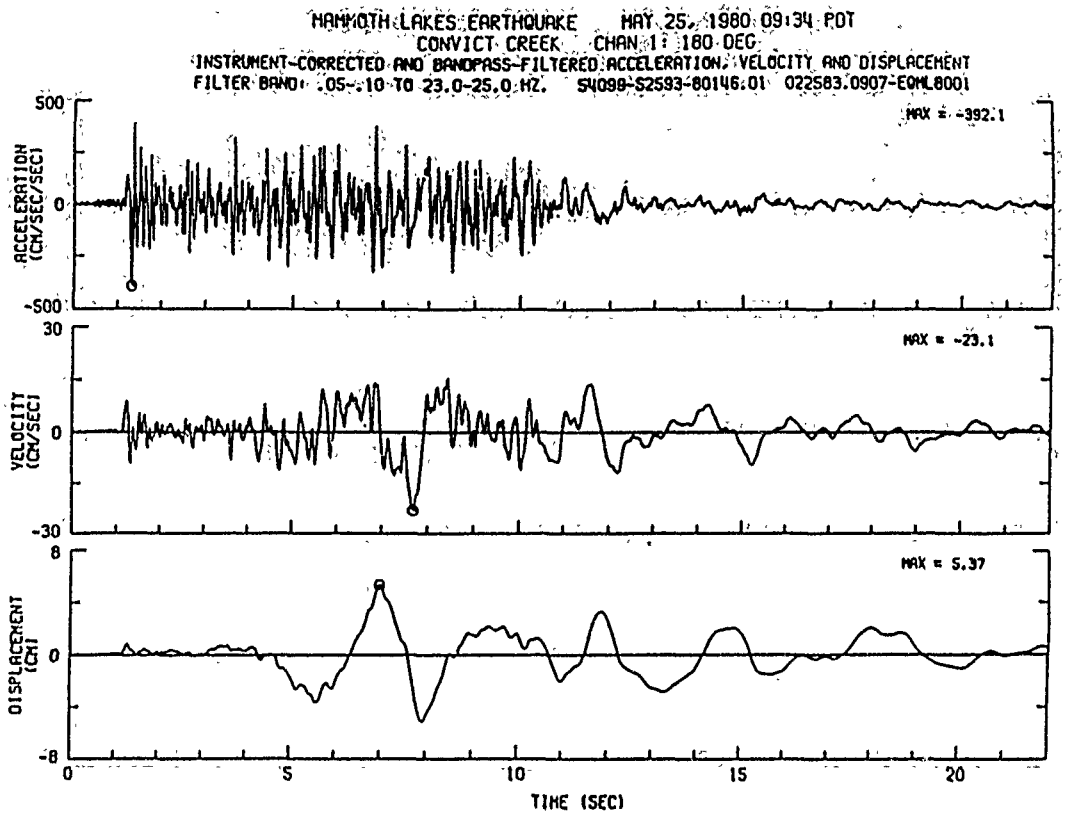
2317.135DEG

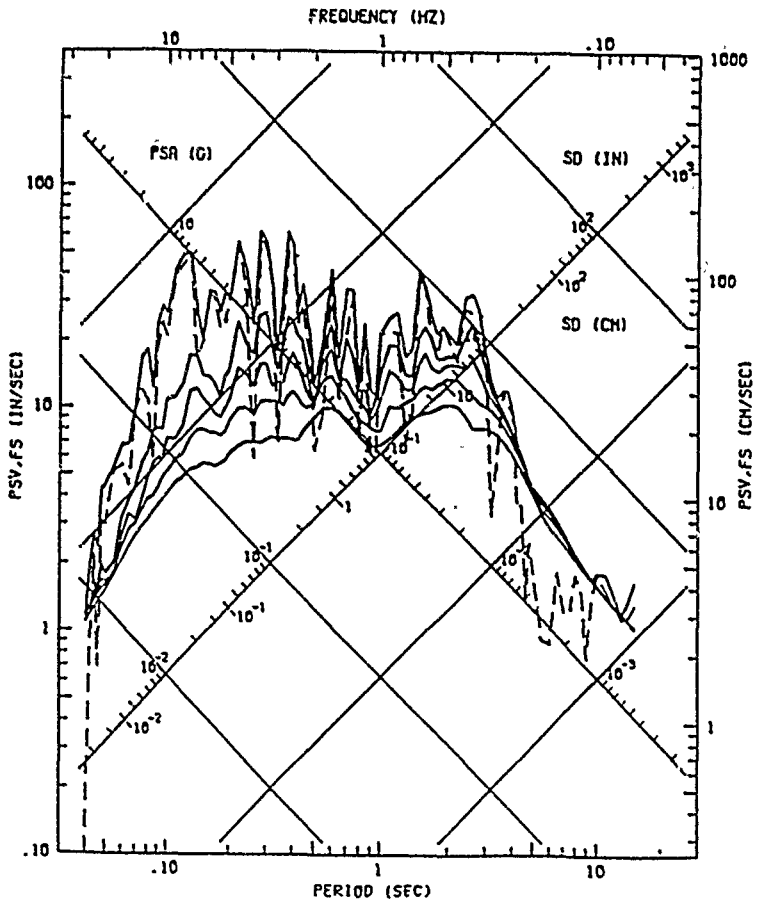
CRITICAL DAMPING

0.2.5.10.20 PERCENT

SUPERSTITION MT.CAL.10/15/79.

CAL 139





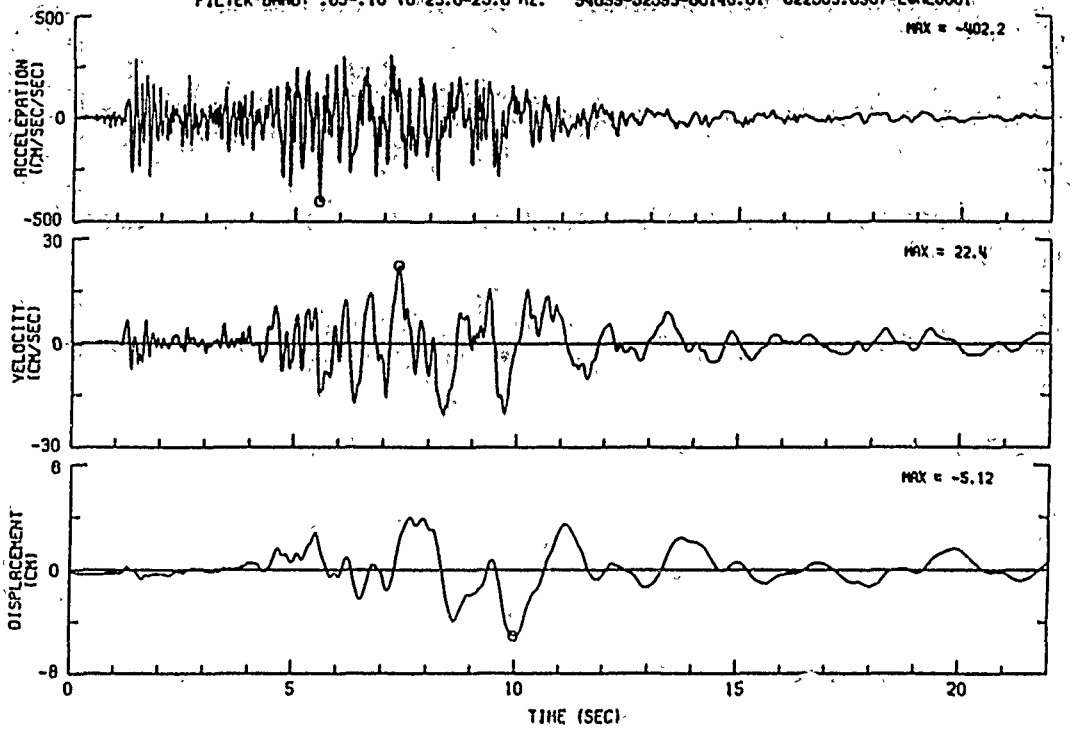
CDMG PRINTOUT

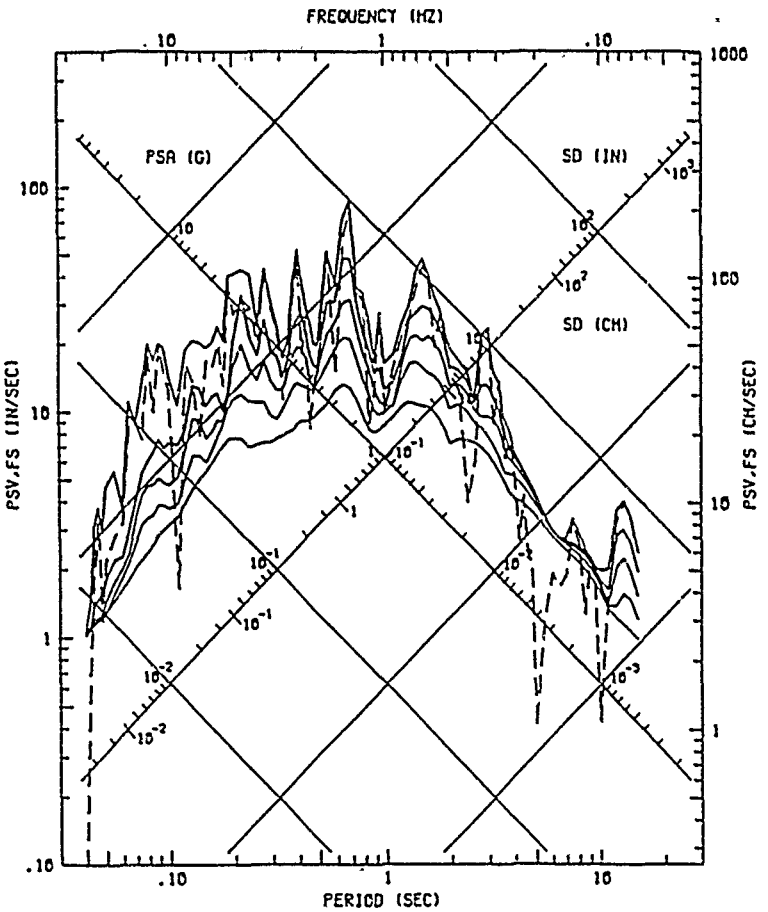
CONVICT CREEK
CHAN 1: 180 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
S4099-S2593-80146.01
022483.1610-EQML8001

—— RESPONSE SPECTRA: PSV,PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAMMOTH LAKES EARTHQUAKE
MAY 25, 1980 09:34 PDT

CAL 157



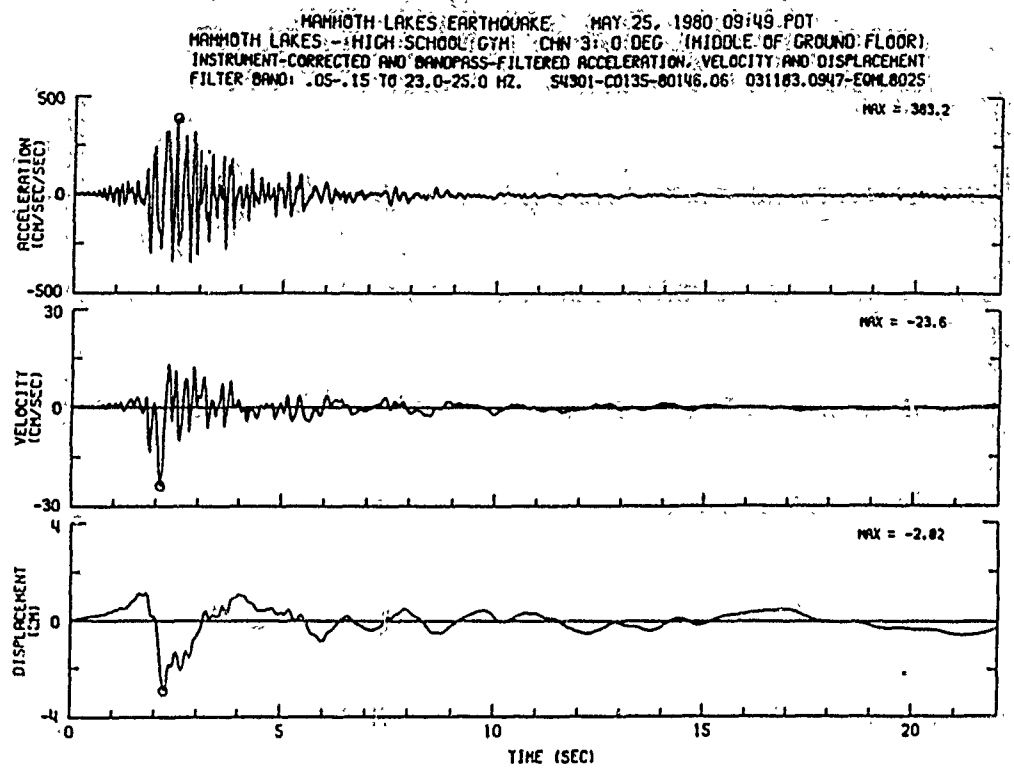


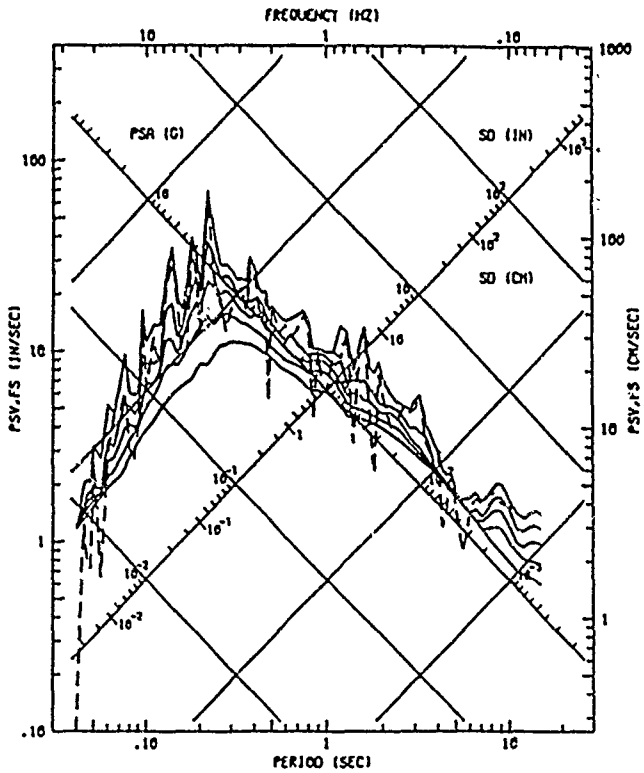
CDMG PRINTOUT

CONVICT CREEK
CHAN 3: 90 DEG
ACCELEROGRAH BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
54099-S2593-80146.01
022493.1610-ECML8001
—— RESPONSE SPECTRA: PSV,PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAMMOTH LAKES EARTHQUAKE
MAY 25, 1980 09:34 PDT

CAL 158



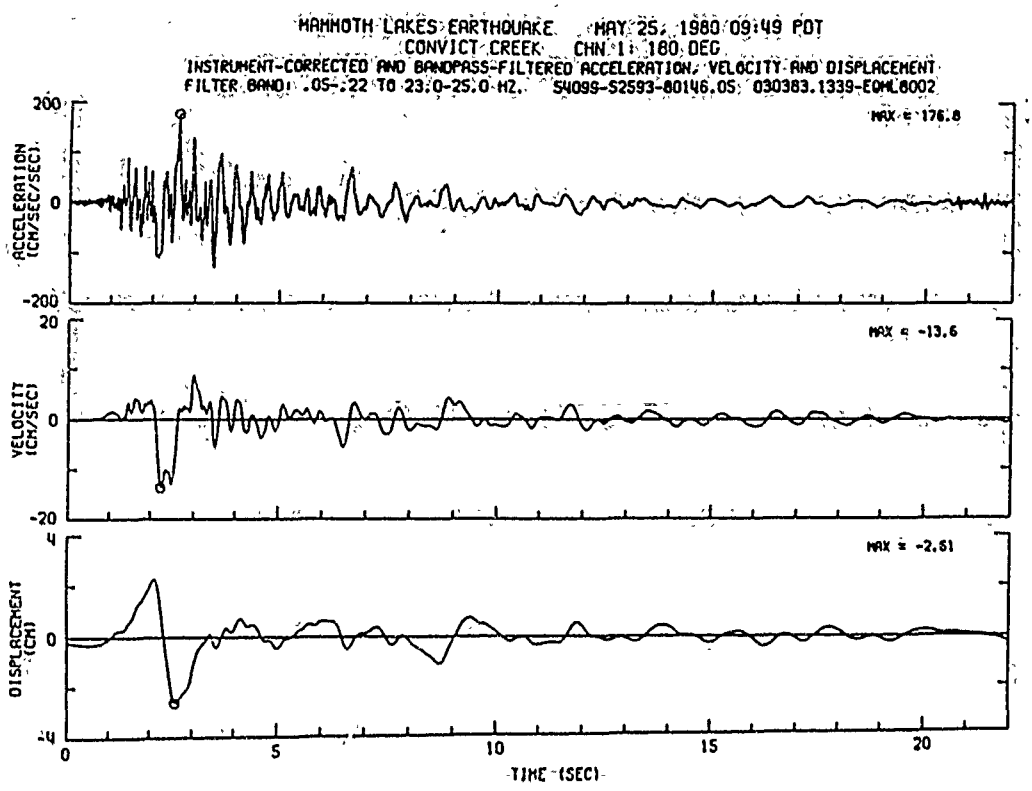


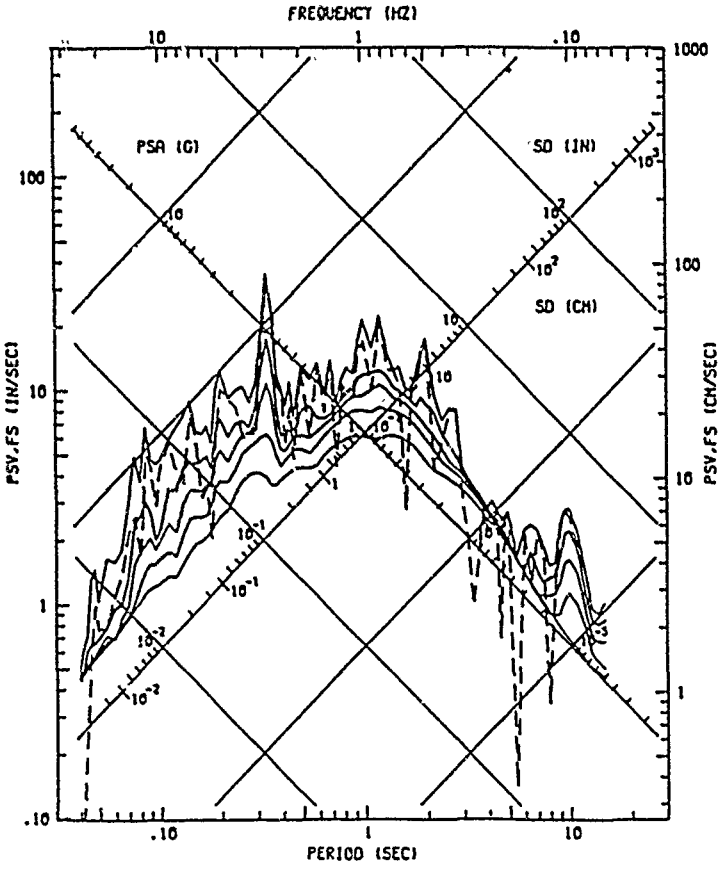
CDMG PRINTOUT

MAMMOTH LAKES - HIGH SCHOOL GYM
CHN 3: 0 DEG (MIDDLE OF GROUND FLOOR)
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
54301-C0135-80146.06
031083.1628-EQML8025
—— RESPONSE SPECTRA: PSV,PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAMMOTH LAKES EARTHQUAKE
MAY 25, 1980 09:49 PDT

CAL 163



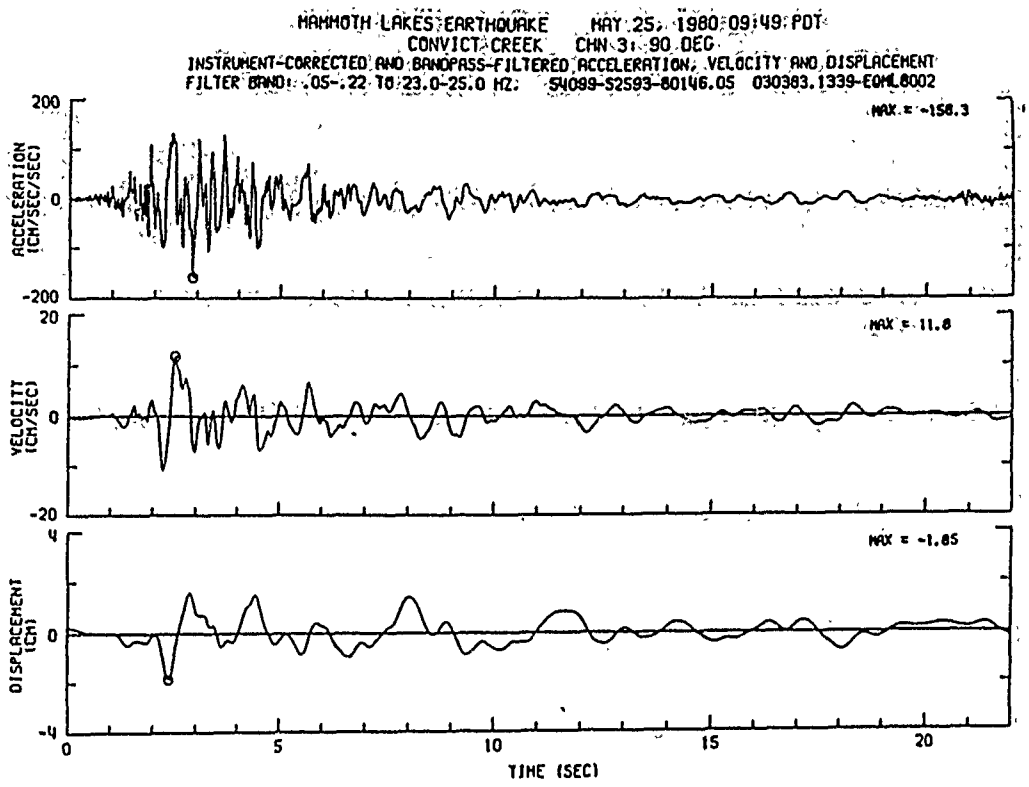


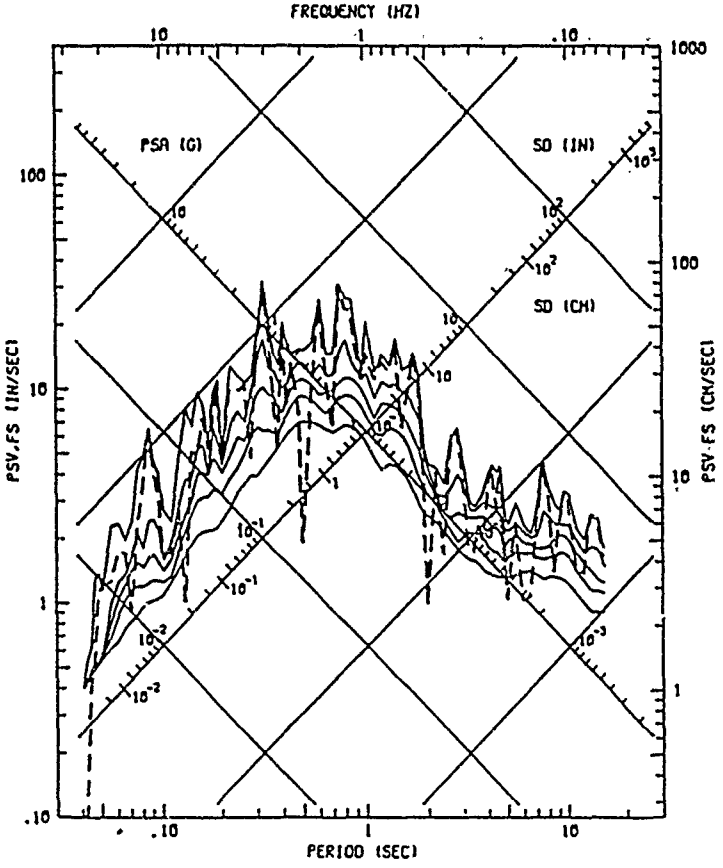
CDMG PRINTOUT

CONVICT CREEK
CHAN 1: 180 DEG
ACCELEROGRAH BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
S4099-S2593-80146.05 030183.1159-EQML8002
—— RESPONSE SPECTRA: PSV,PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0.2.5.10.20%

MAMMOTH LAKES EARTHQUAKE
MAY 25, 1980 09:49 PDT

CAL 165



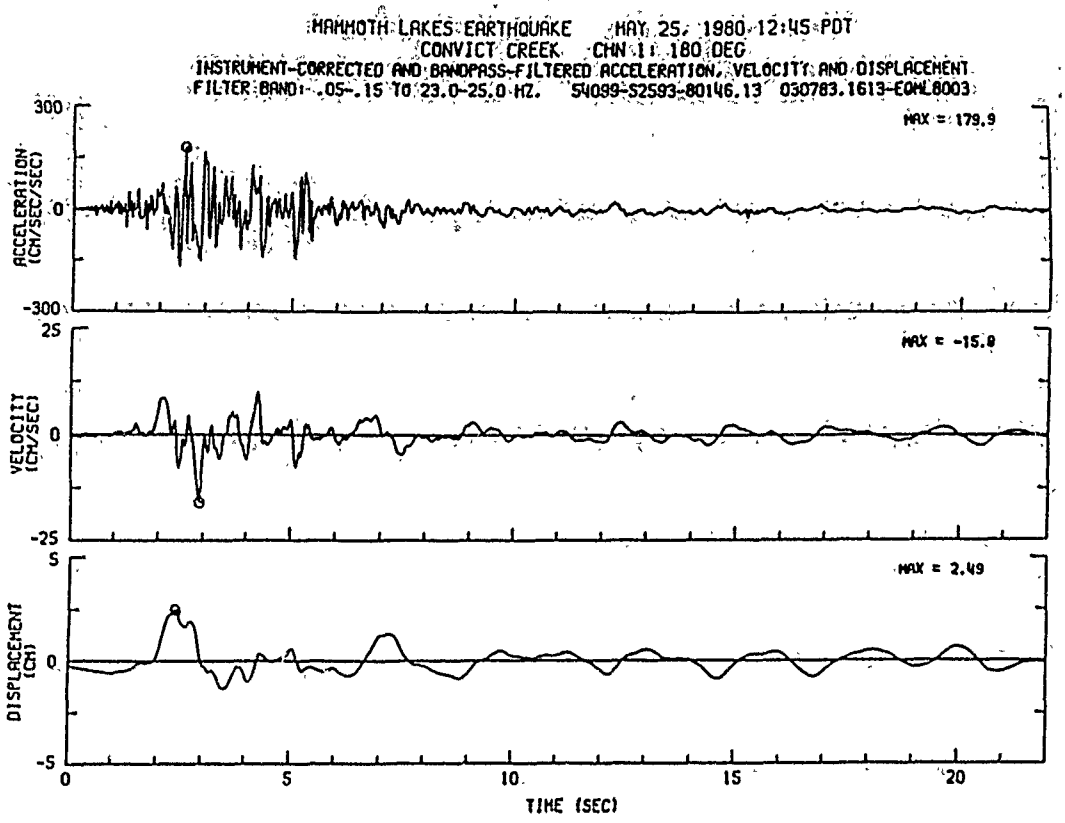


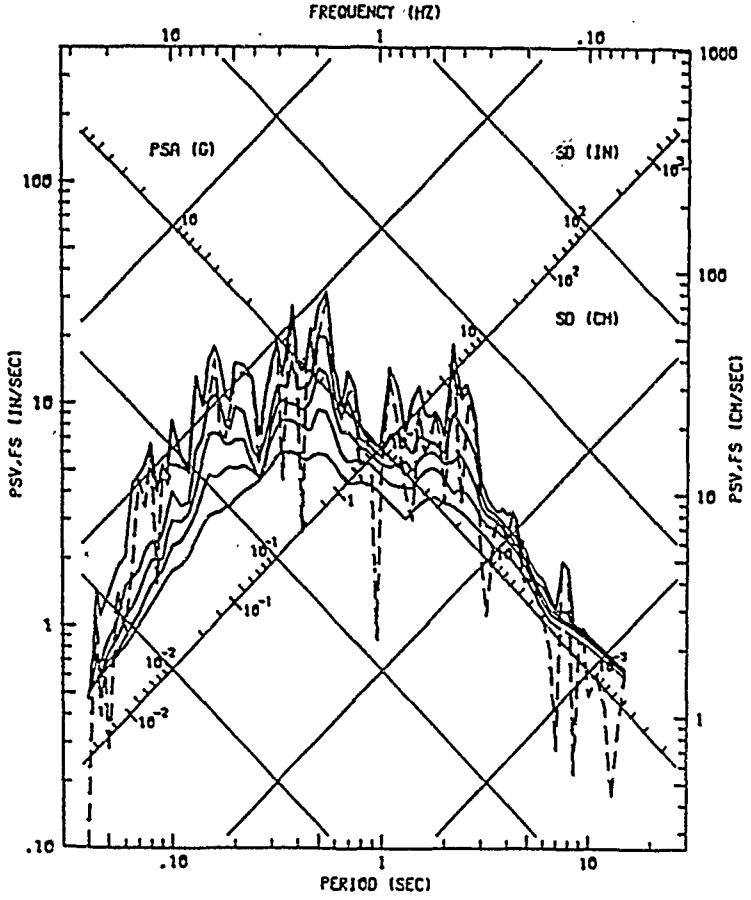
CDMG PRINTOUT

CONVICT CREEK
CHAN 3: 90 DEG
ACCELEROGRAH BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
54099-S2593-80146.05 030183.1159-EOML8002
—— RESPONSE SPECTRA: PSV,PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAMMOTH LAKES EARTHQUAKE
MAY 25, 1980 09:49 PDT

CAL 166



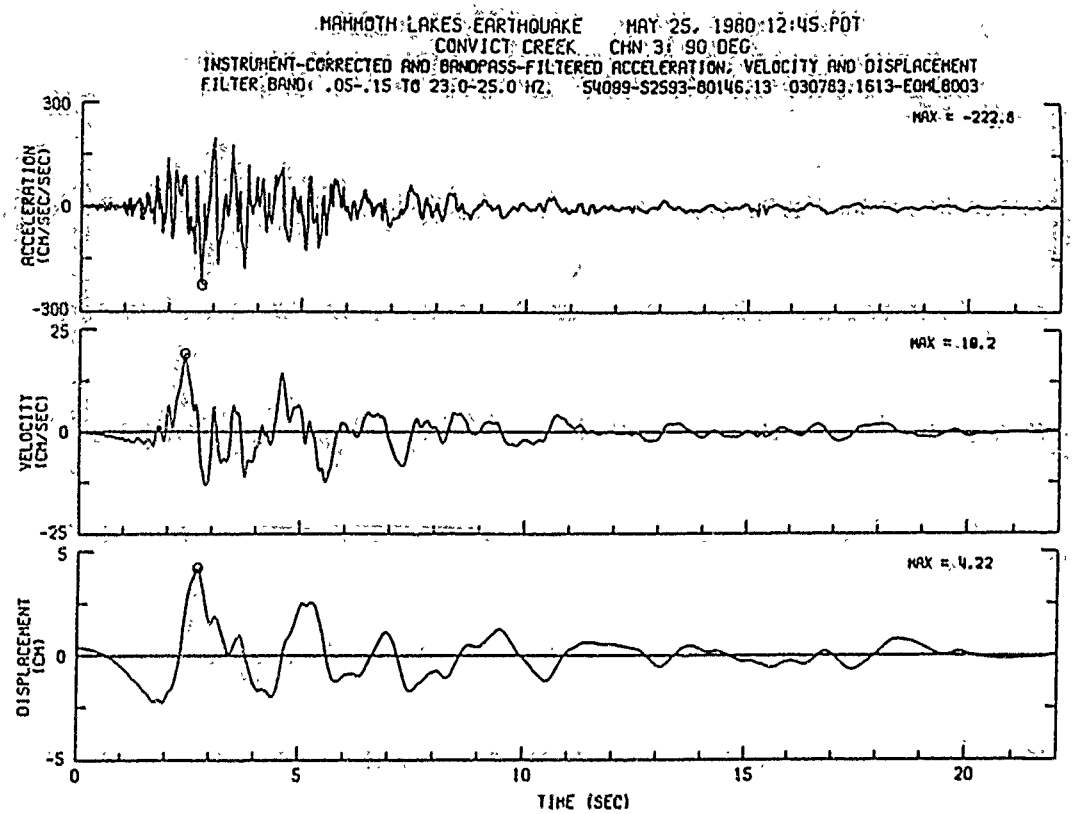


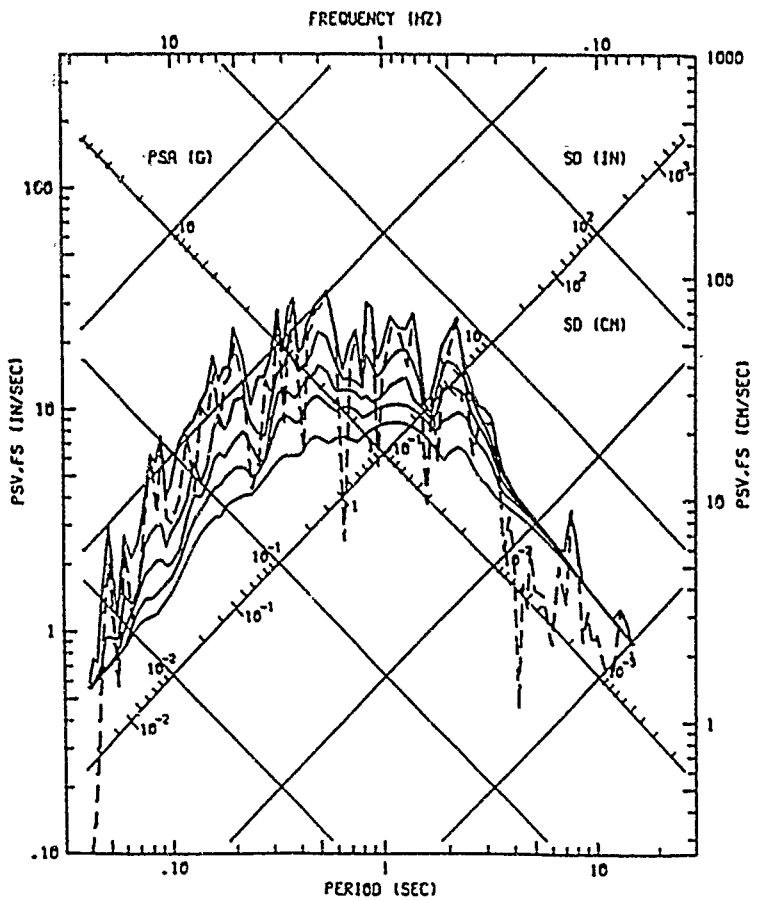
CDMG PRINTOUT

CONVICT CREEK
CHN 1: 180 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
54099-S2593-80146.13 030783.1117-EOML800
—— RESPONSE SPECTRA: PSV,PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAMMOTH LAKES EARTHQUAKE
MAY 25, 1980 12:45 PDT

CAL 167



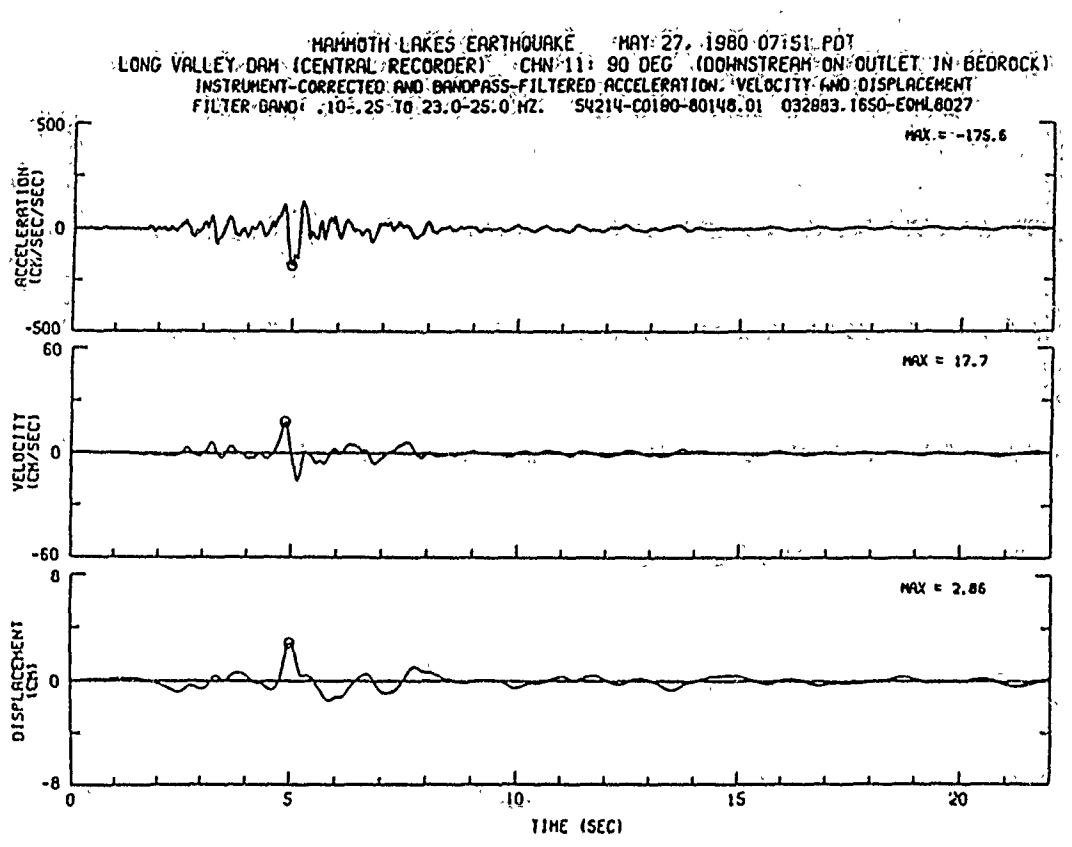


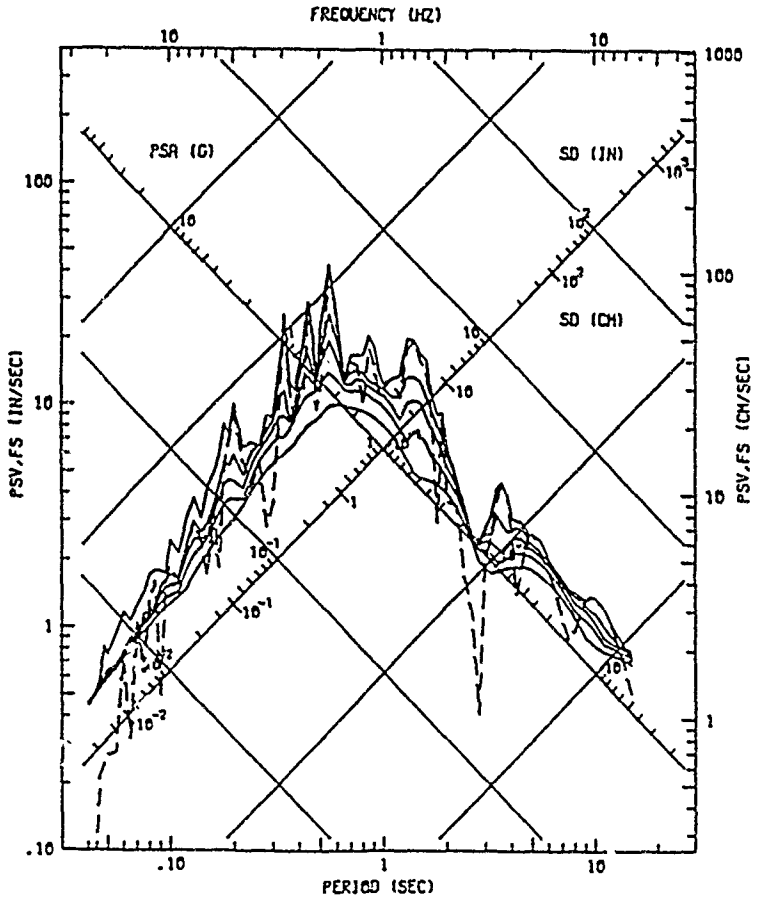
CDMG PRINTOUT

CONVICT CREEK
CHN 3: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
54099-S2593-80146.13 030783.1117-EQML800
—— RESPONSE SPECTRA: PSV,PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAMMOTH LAKES EARTHQUAKE
MAY 25, 1980 12:45 PDT

CAL 168



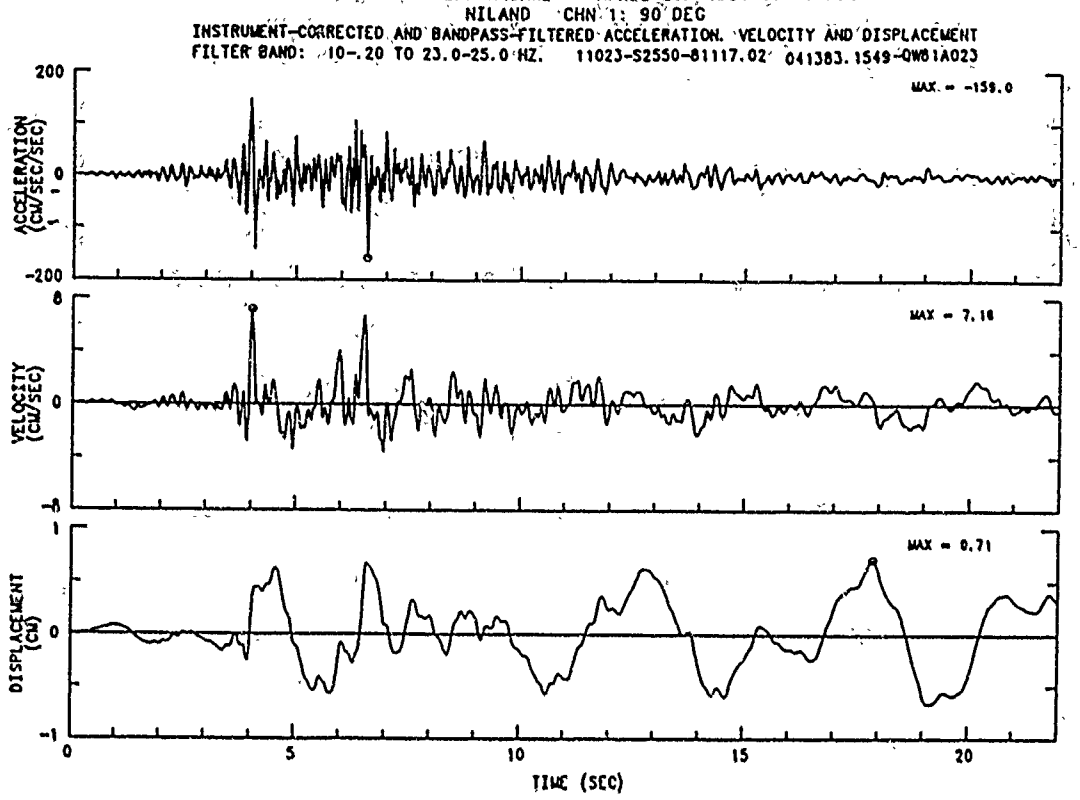


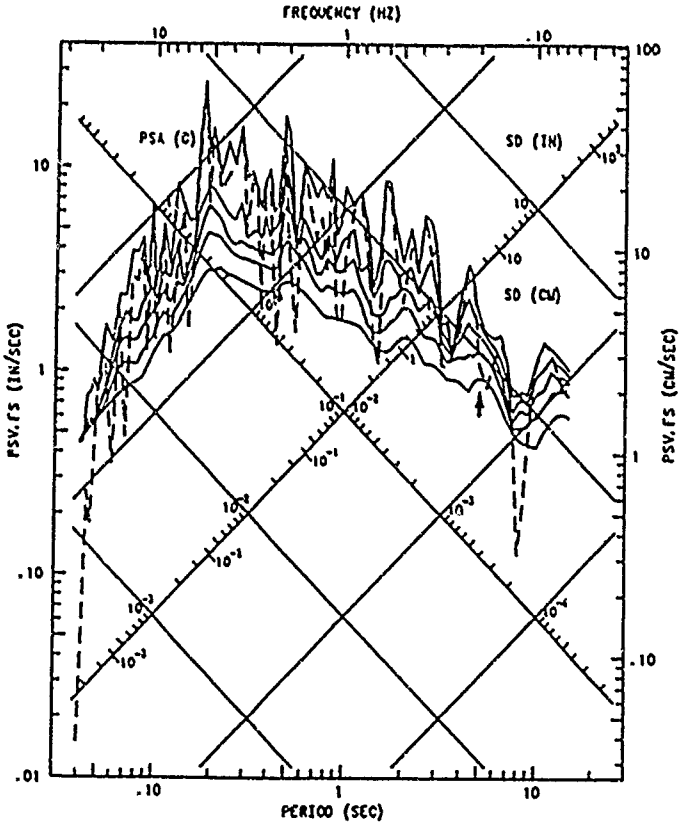
CDMG PRINTOUT

MAMMOTH LAKES EARTHQUAKE
LONG VALLEY DAM (CENTRAL RECORDER)
CHN 11: 90 DEG
(DOWNSTREAM ON OUTLET IN BEDROCK)
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
SV214-C0190-80148.01
032983.1248-EQML8027
—— RESPONSE SPECTRA: PSV,PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAY 27, 1980 07:51 PDT

CAL 171



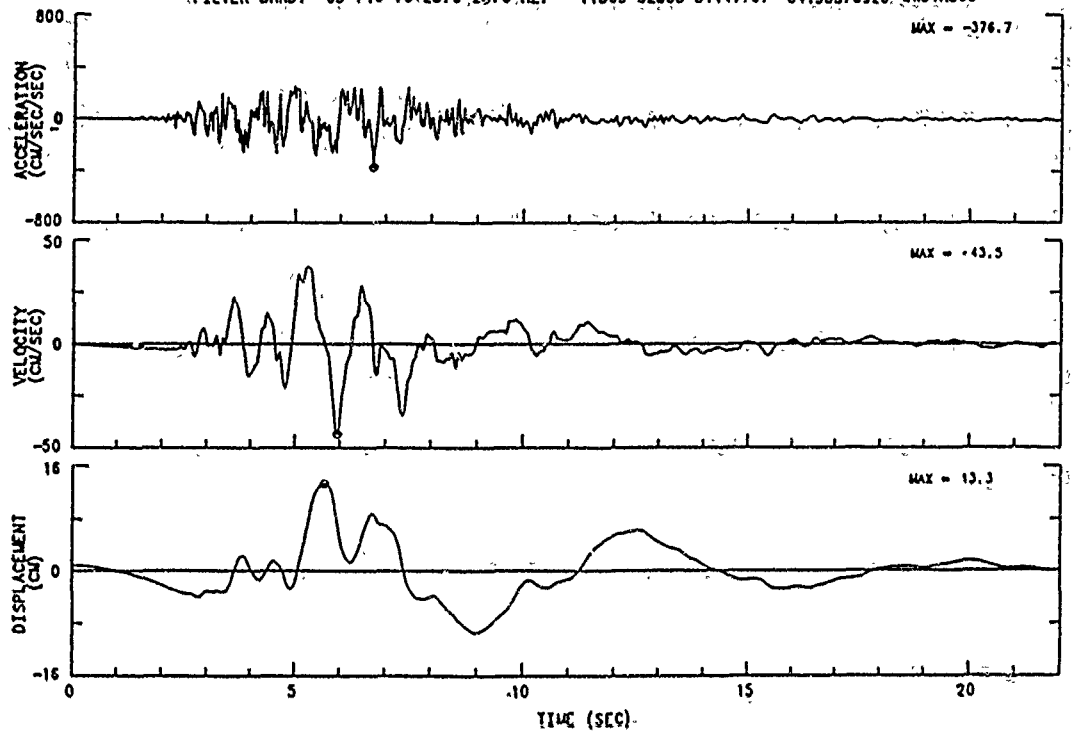


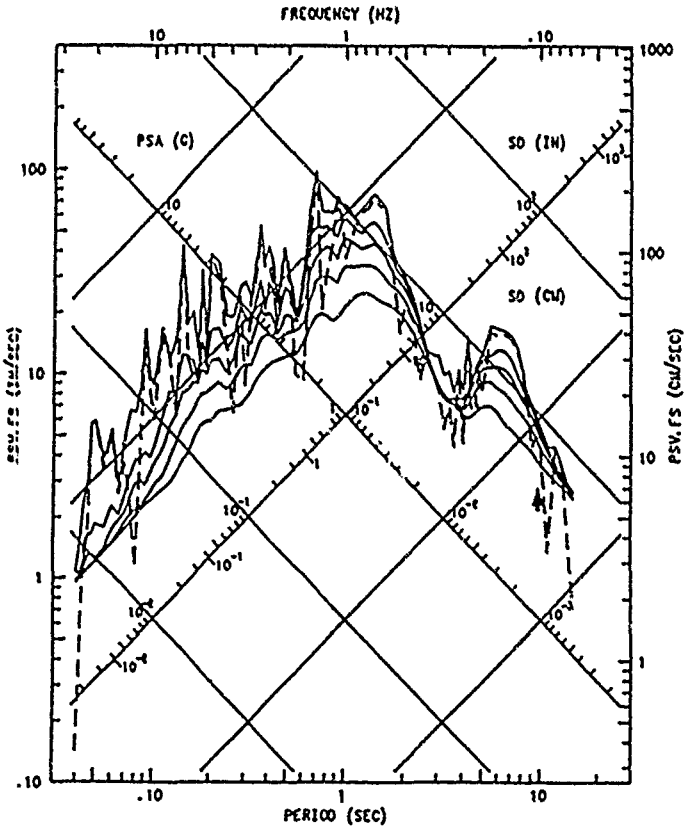
CDMG OSMS 81-5.1

NILAND
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
11023-S2550-81117.02
041383.1033-QW81A023
—— RESPONSE SPECTRA: PSV, PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

WESTMORLAND EARTHQUAKE
APRIL 26, 1981 05:09 PDT

CAL 173





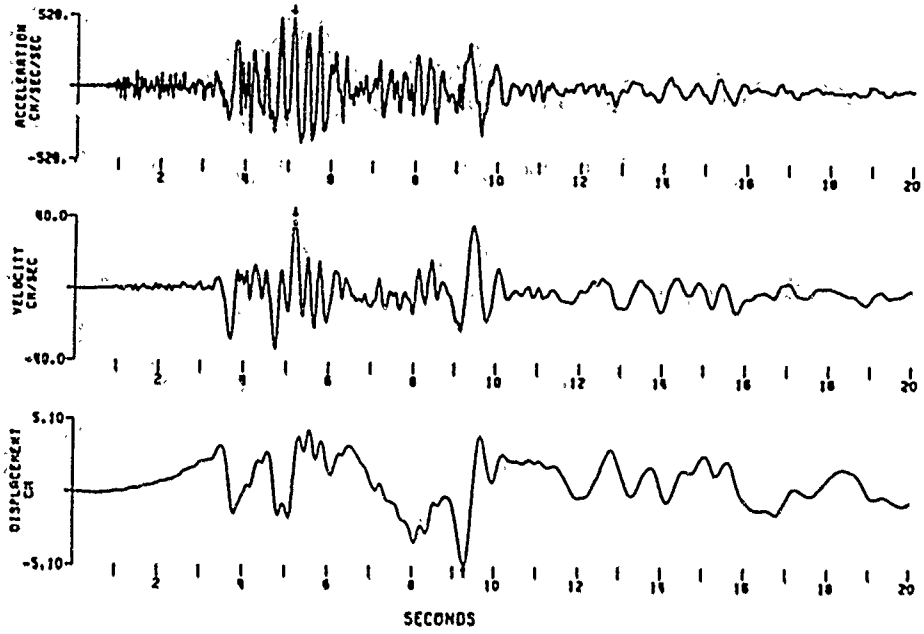
CDMG OSMS 81-5.1

WESTMORLAND
CHN 3: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
11369-S2588-81117.07
041383.0731-QW81A369
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

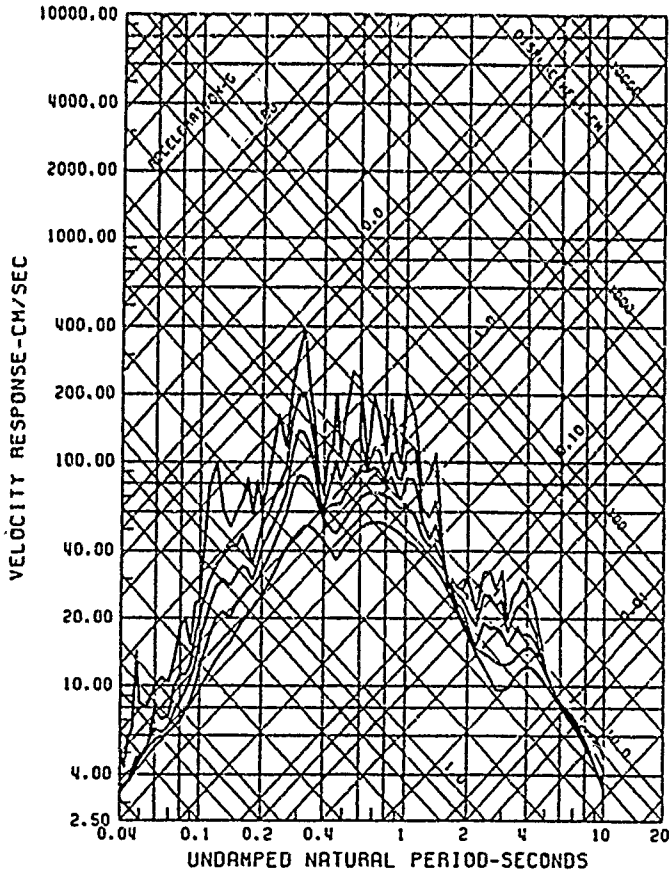
WESTMORLAND EARTHQUAKE
APRIL 26, 1981 05:09 PDT

CAL 175

Corrected acceleration, velocity, and displacement time histories (200 samples/sec) as recorded on 135° horizontal component at Pleasant Valley pumping plant (switchyard). Peak values: acceleration, 514.43 cm/sec^2; velocity, 39.22 cm/sec; displacement, 5.05 cm (bandpass filtered 0.1-50 Hz, Butterworth order 8 lowcut, cosine taper 50-Hz highcut).



USGS/EERL 84-03

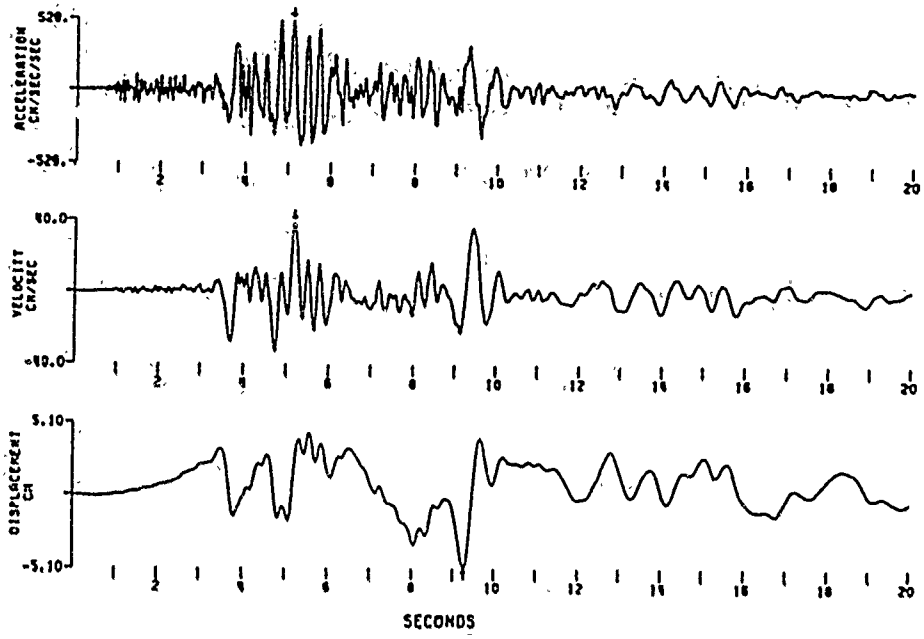


U.S. National Strong-Motion Data Center
Band pass filtered 0.1 to 50 Hz
135° horizontal component
critical damping
0, 2, 5, 10, 20 percent

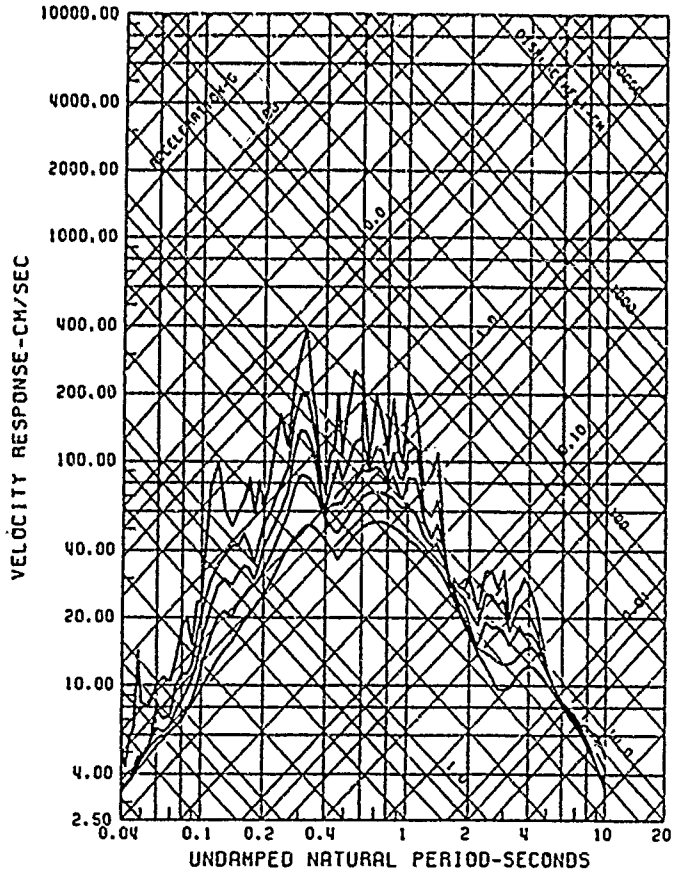
Pleasant Valley pumping plant (switchyard)
2 May 1983 (2342 UTC)

CAL 183

Corrected acceleration, velocity, and displacement time histories (200 samples/sec) as recorded on 135° horizontal component at Pleasant Valley pumping plant (switchyard). Peak values: acceleration, 514.43 cm/sec^2; velocity, 39.22 cm/sec; displacement, 5.05 cm (bandpass filtered 0.1-50 Hz, Butterworth order 8 lowcut, cosine taper 50-Hz highcut).



USGS/EERL 84-03

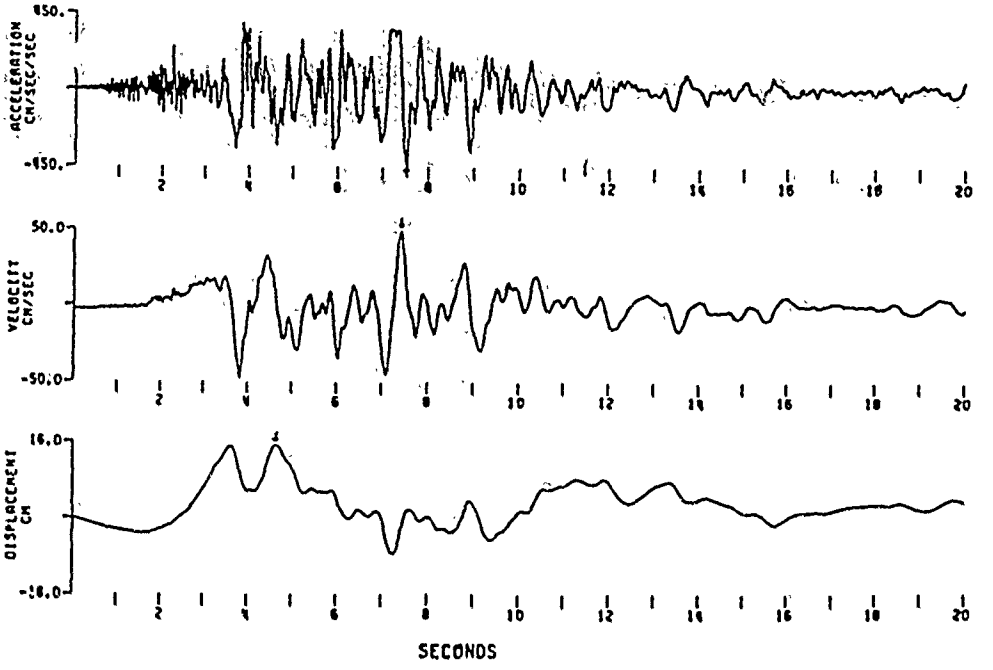


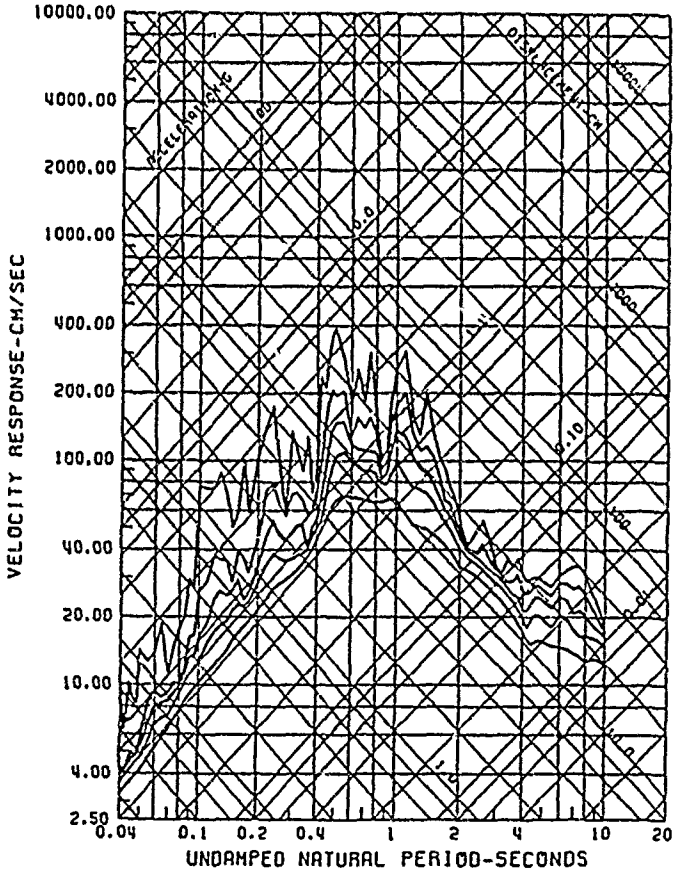
U.S. National Strong-Motion Data Center
Band pass filtered 0.1 to 50 Hz
135° horizontal component
critical damping
0, 2, 5, 10, 20 percent

Pleasant Valley pumping plant (switchyard)
2 May 1983 (2342 UTC)

CAL 183

(c) 45° horizontal component. Peak values: acceleration, -440.56 cm/sec^2; velocity, 49.96 cm/sec; displacement, 15.46 cm (bandpass filtered 0.1-50 Hz, Butterworth order 8 lowcut, cosine taper 50-Hz highcut).



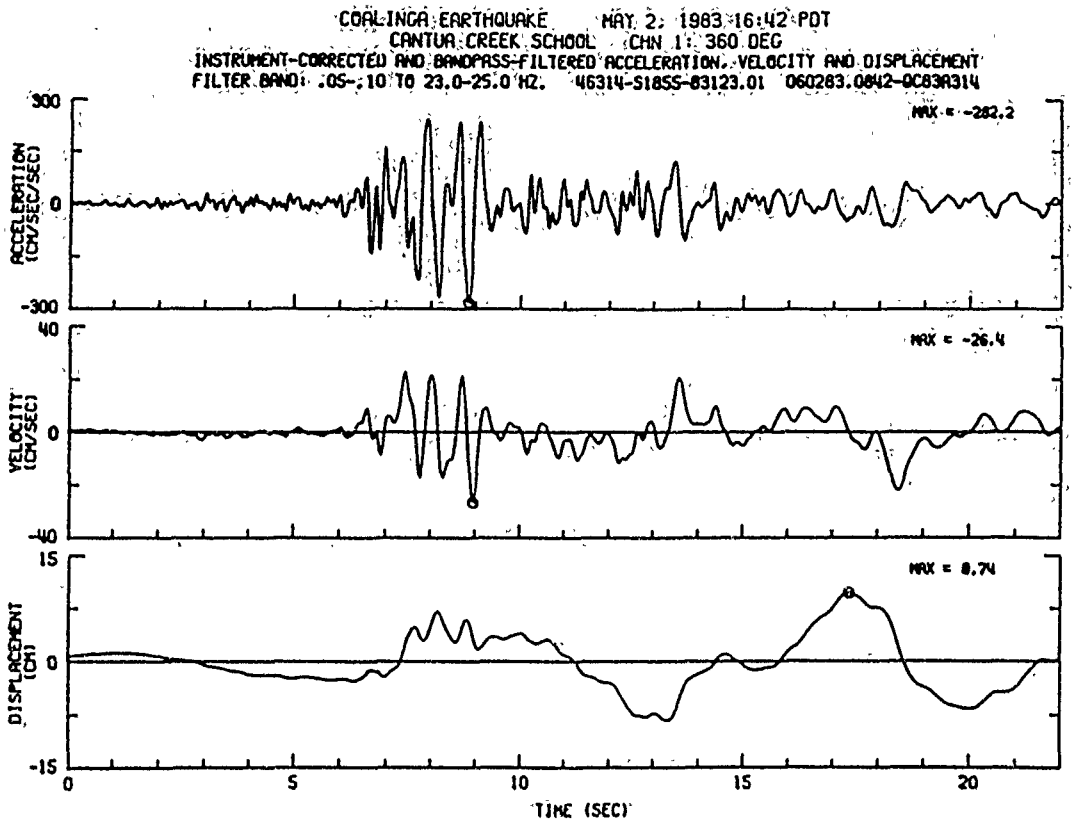


USGS/EERL 84-03

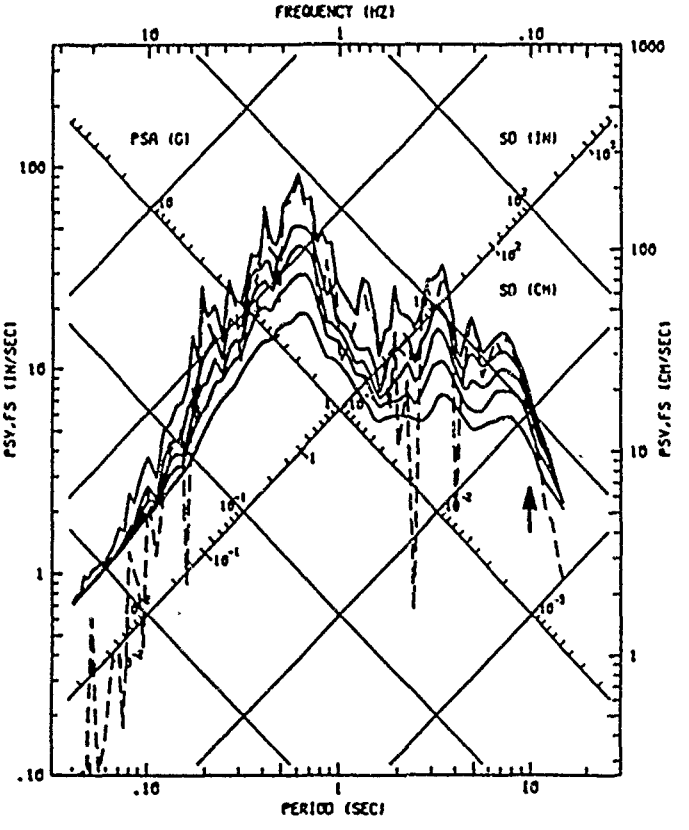
U.S. National Strong-Motion Data Center
Band pass filtered 0.1 to 50 Hz
045° horizontal component
critical damping
0, 2, 5, 10, 20 percent

Pleasant Valley pumping plant (switchyard)
2 May 1983 (2342 UTC)

CAL 184



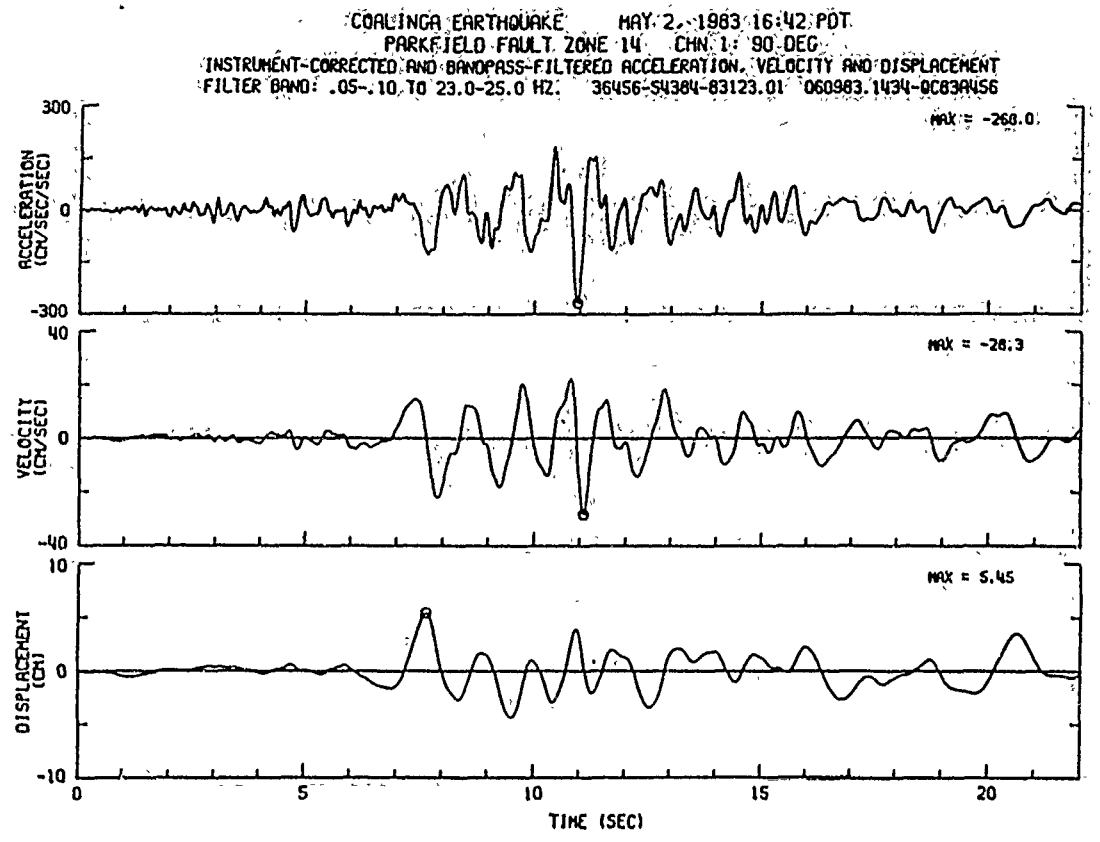
CDMG PRINTOUT



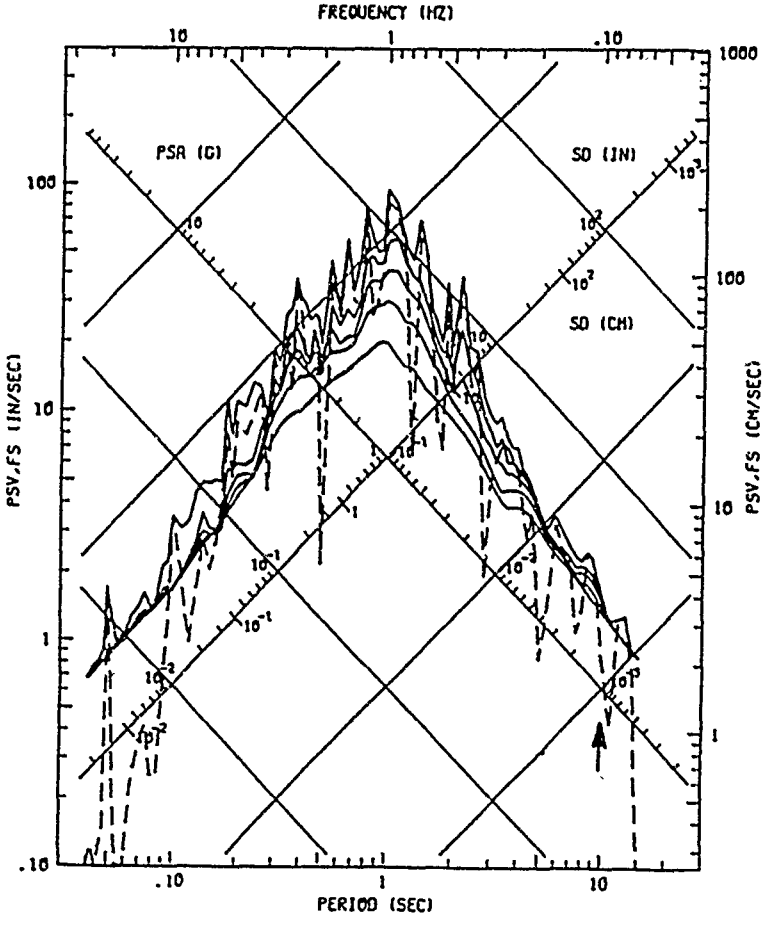
CANTUA CREEK SCHOOL
CHN 1: 360 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
46314-S1855-83123.01
060183.1117-0C83A314
—— RESPONSE SPECTRA: PSV,PSA & S
— — FOURIER AMPLITUDE SPECTRUM: F
DAMPING VALUES: 0,2,5,10,20%

COALINGA EARTHQUAKE
MAY 2, 1983 16:42 PDT

CAL 187



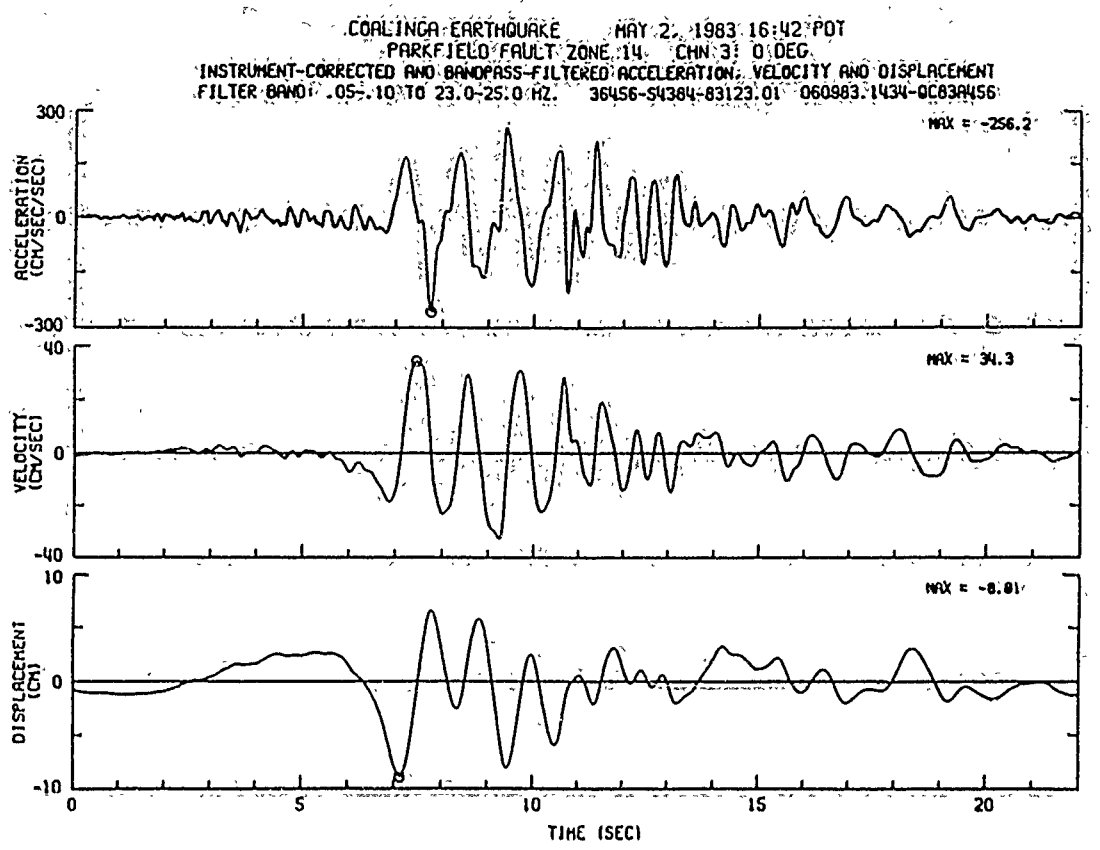
CDMG PRINTOUT



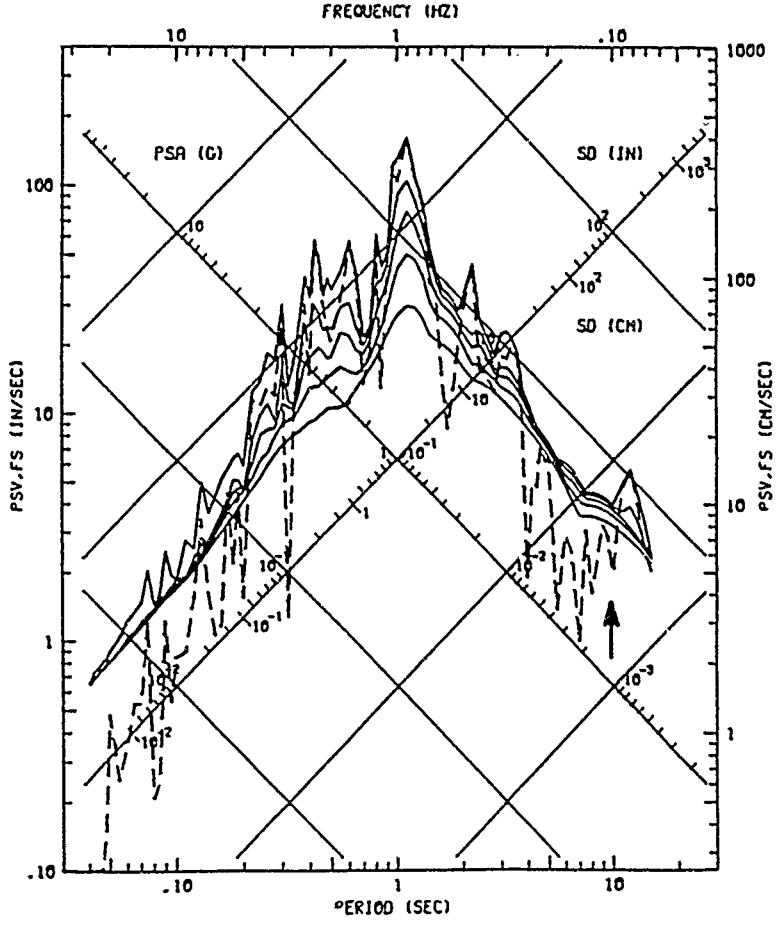
COALINGA EARTHQUAKE
PARKFIELD FAULT ZONE 14
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
36456-S4384-83123.01 060683.1317-0C83A456
—— RESPONSE SPECTRA: PSV,PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAY 2, 1983 16:42 PDT

CAL 189



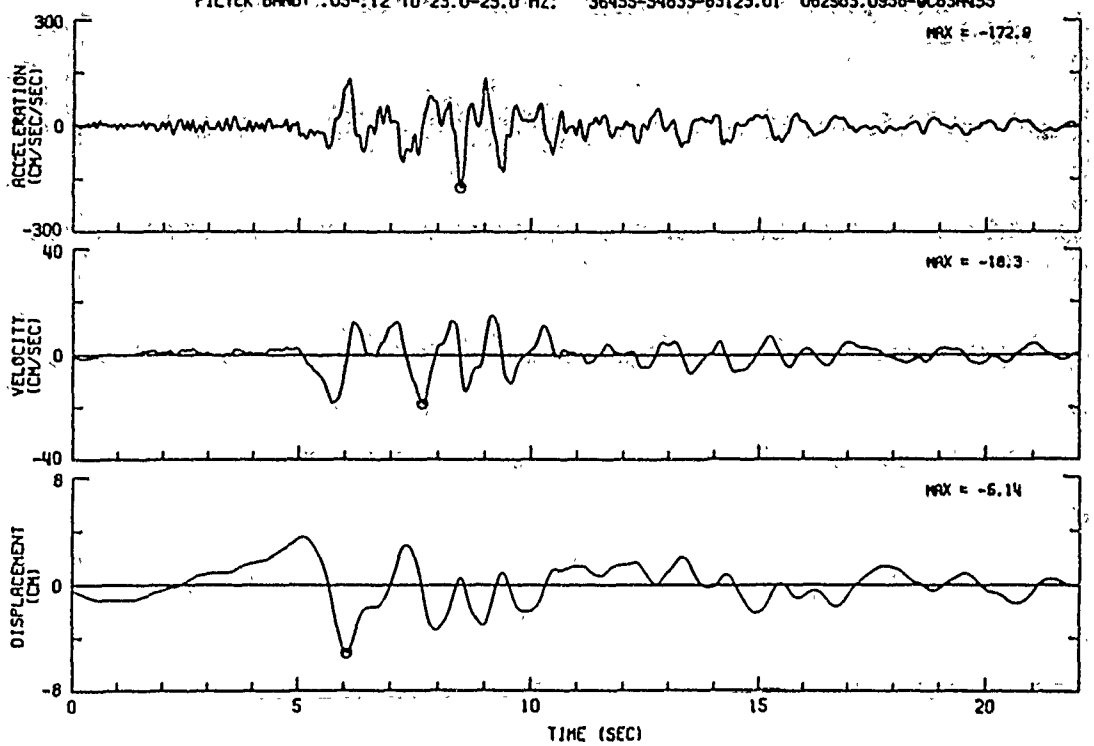
CDMG PRINTOUT



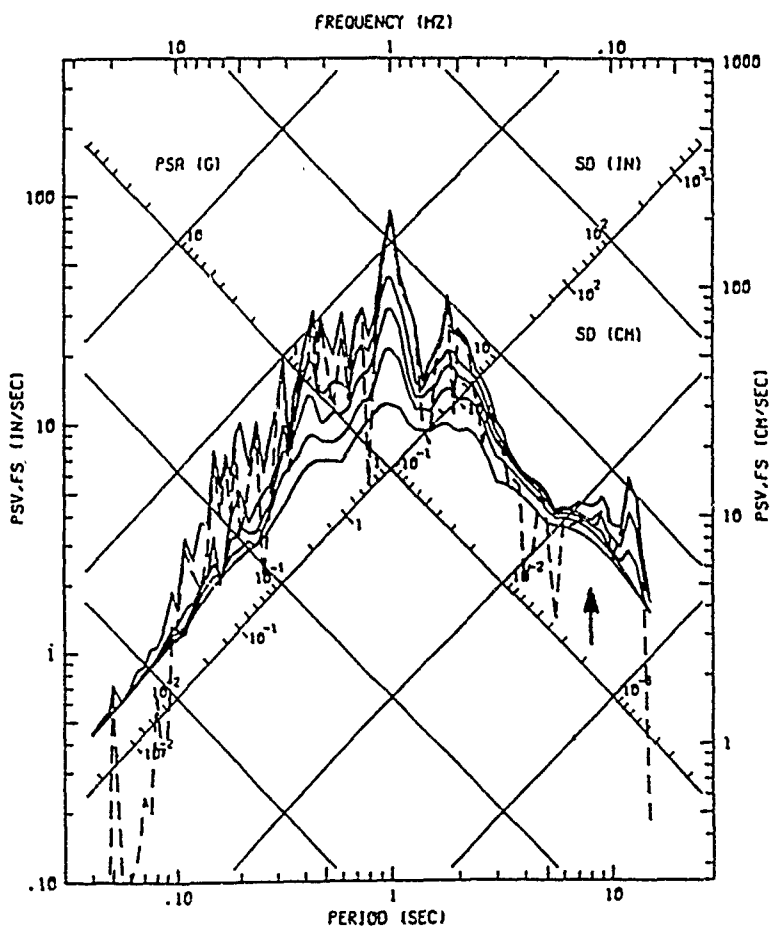
COALINGA EARTHQUAKE
PARKFIELD FAULT ZONE 14
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
36456-S4384-83123.01 060683.1317-0C83AN56
—— RESPONSE SPECTRA: PSV,PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAY 2, 1983 16:42 PDT

CAL 190



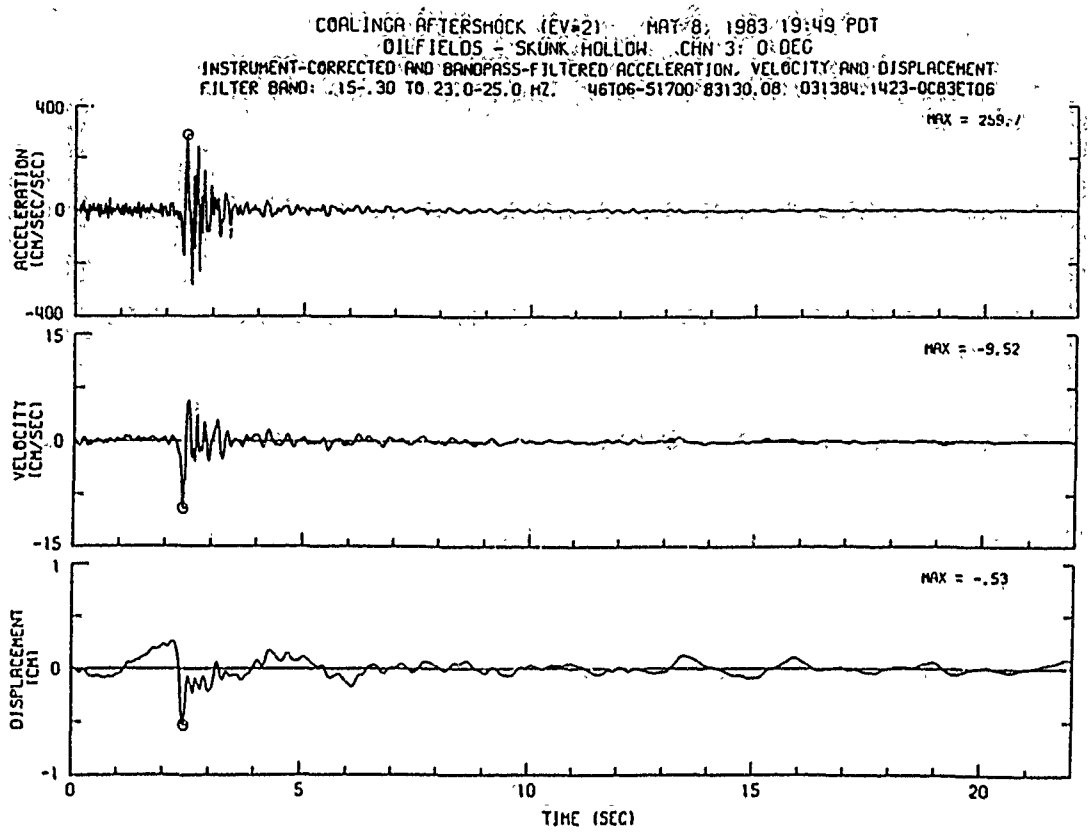
CDMG PRINTOUT



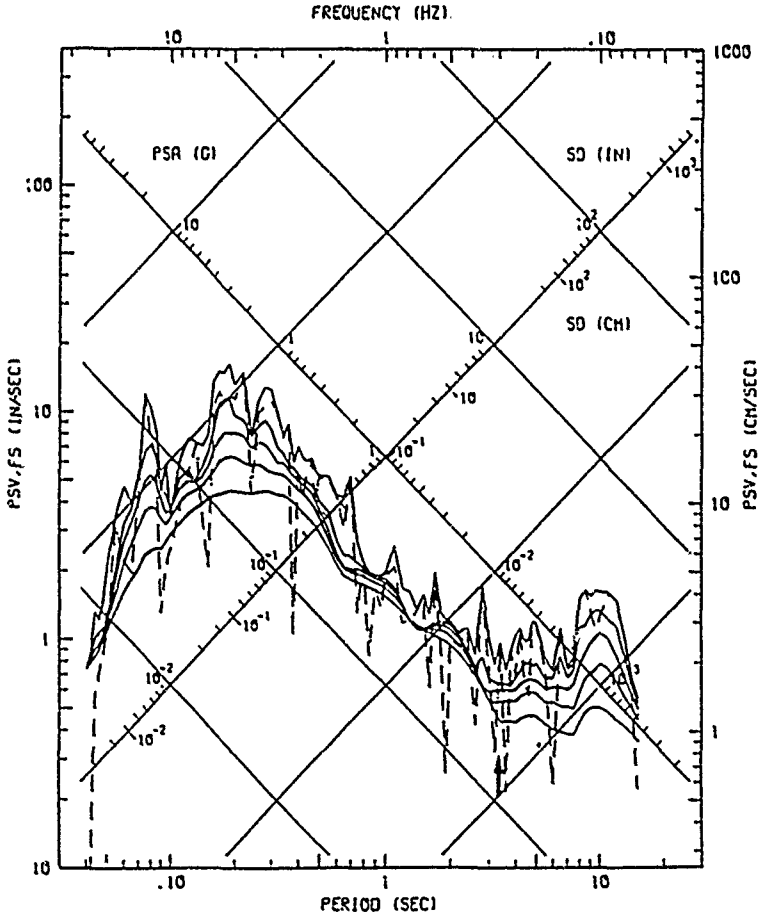
COALINGA EARTHQUAKE
PARKFIELD VINEYARD CANYON 1 E
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS
.05-.07 TO 23.0-25.0 HZ.
36455-54833-83123.01 062883.1344-0C83A455
—— RESPONSE SPECTRA: PSV,PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

MAY 2, 1983 16:42 PDT

CAL 192



CDMG PRINTOUT



COALINGA AFTERSHOCK (EV=2)
OILFIELDS - SKUNK HOLLOW
CHN 3. 0 DEG

46T06-S1700-83130.08 020784.1529-0C83ET06

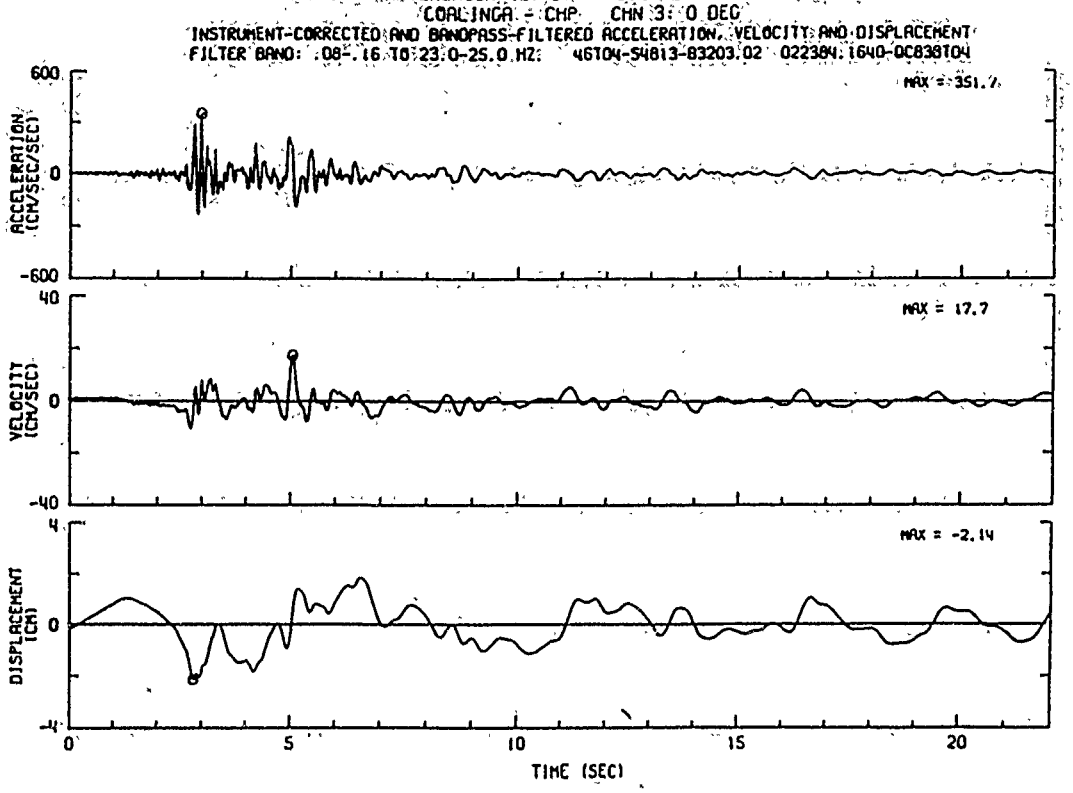
—— RESPONSE SPECTRA: PSV,PSA & SD

– – FOURIER AMPLITUDE SPECTRUM: FS

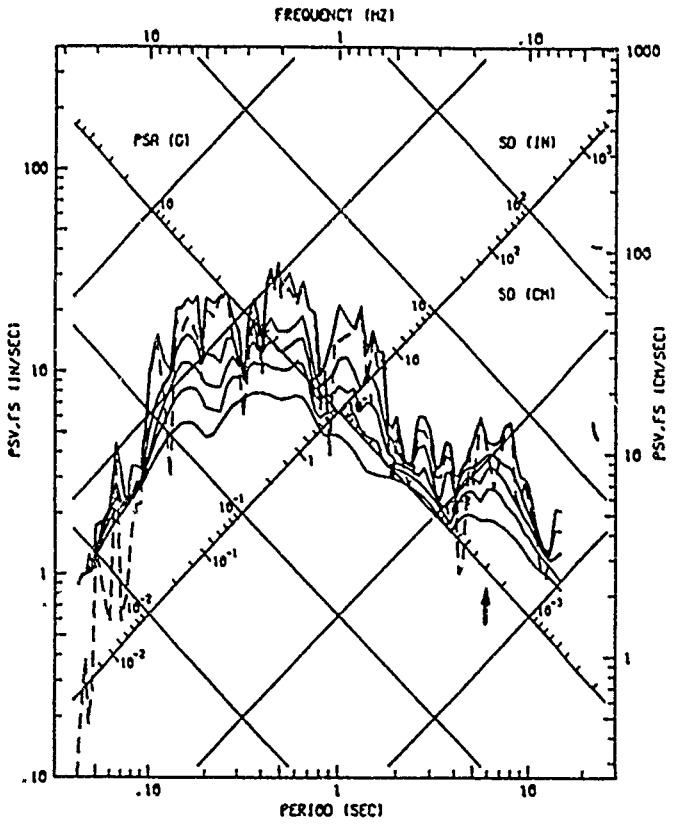
DAMPING VALUES: 0,2,5,10,20%

MAY 8, 1983 19:49 PDT

CAL 203



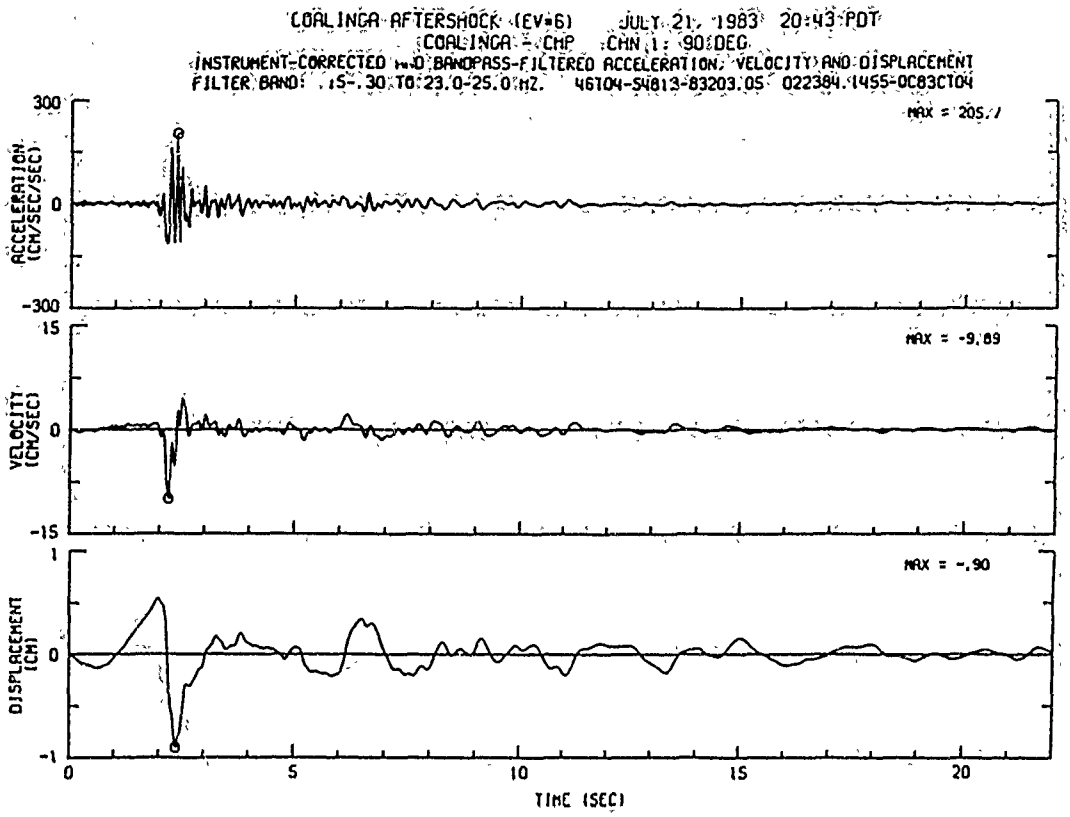
CDMG PRINTOUT



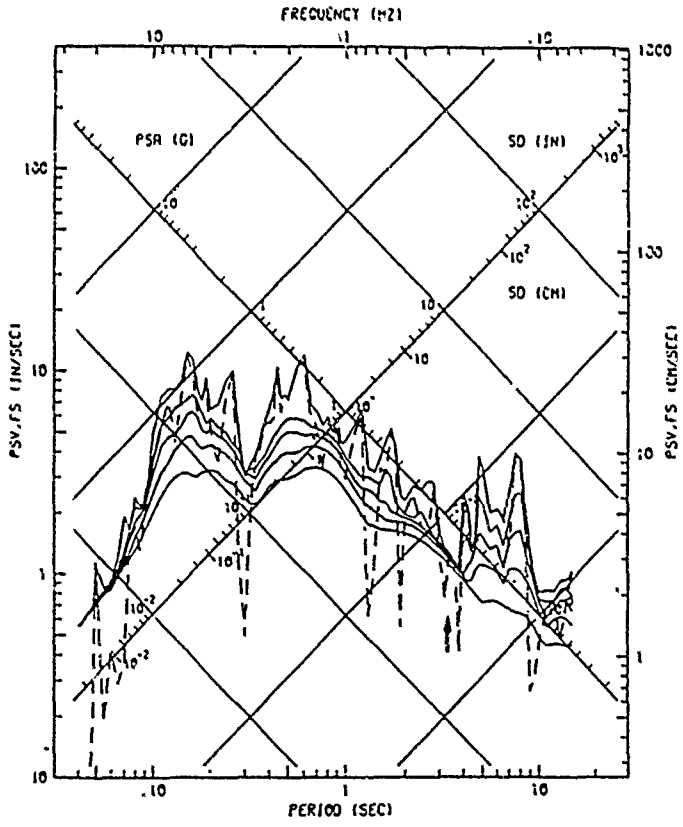
COALINGA AFTERSHOCK (EV=5)
COALINGA - CHP
CHN 3: 0 DEG
46T04-S4813-83203.02
022084.1335-0C838T04
—— RESPONSE SPECTRA: PSV,PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

JULY 21, 1983 19:40 PDT

CAL 210



CDMG PRINTOUT



COALINGA AFTERSHOCK (EV=6)
COALINGA - CHP
CHN 1 90 DEG
46T04-S4813-83203.05
022084.1640-QC83CT04

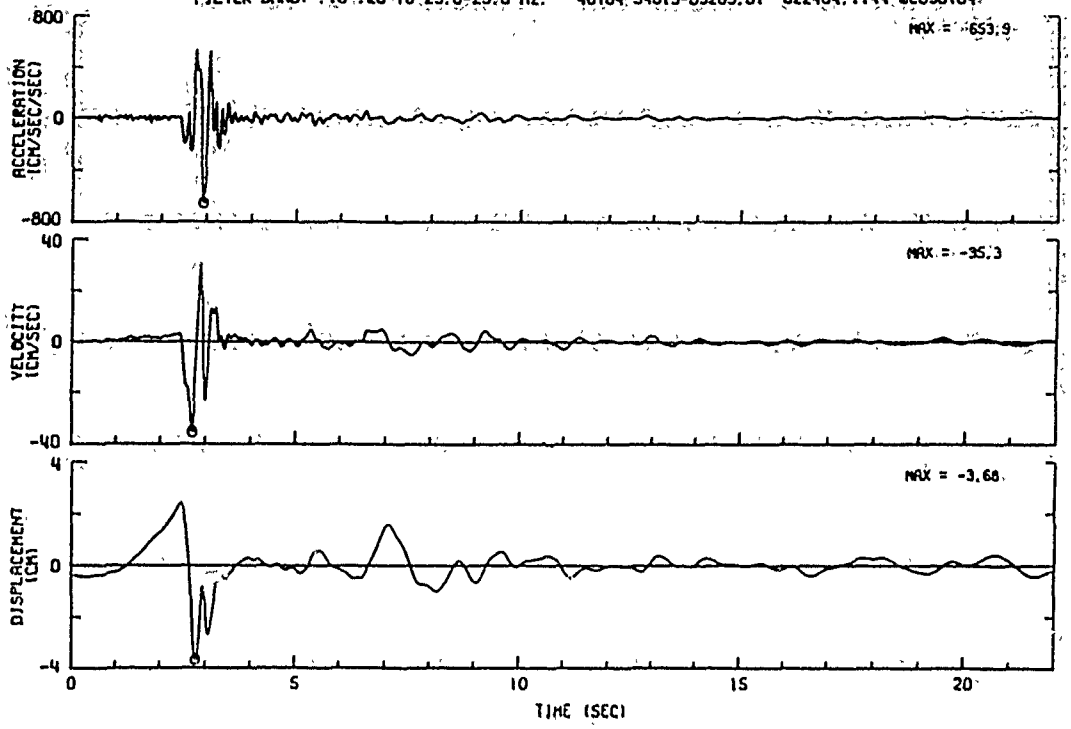
—— RESPONSE SPECTRA: PSV,PSA & SD

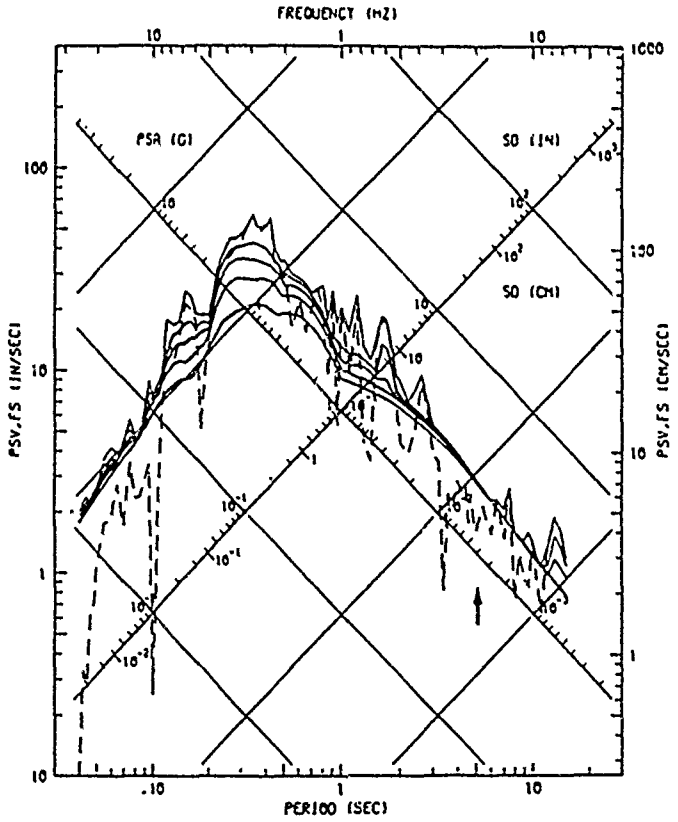
— — FOURIER AMPLITUDE SPECTRUM: FS

DAMPING VALUES. 0,2.5,10,20%

JULY 21, 1983 20 43 PDT

CAL 211





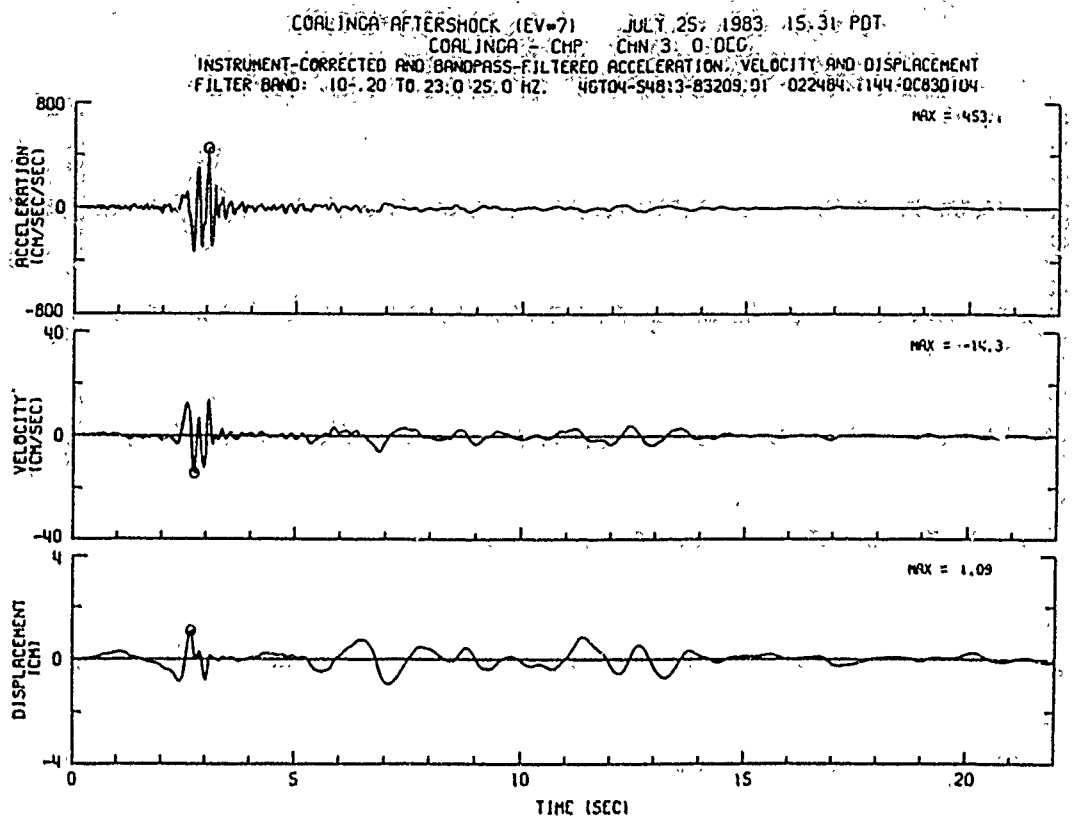
CDMG PRINTOUT

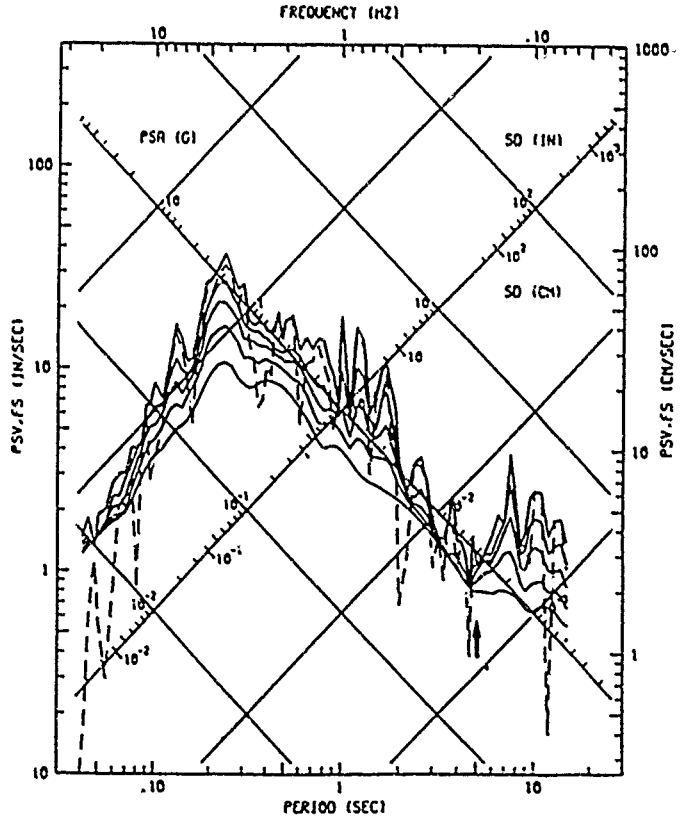
COALINGA AFTERSHOCK (EV#7)
COALINGA - CHP
CHN 1. 90 DEG
46T04-S4813-83209.01
022 '84.1855-0C830T04

—— RESPONSE SPECTRA: PSV,PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

JULY 25, 1983 15.31 PDT

CAL 212





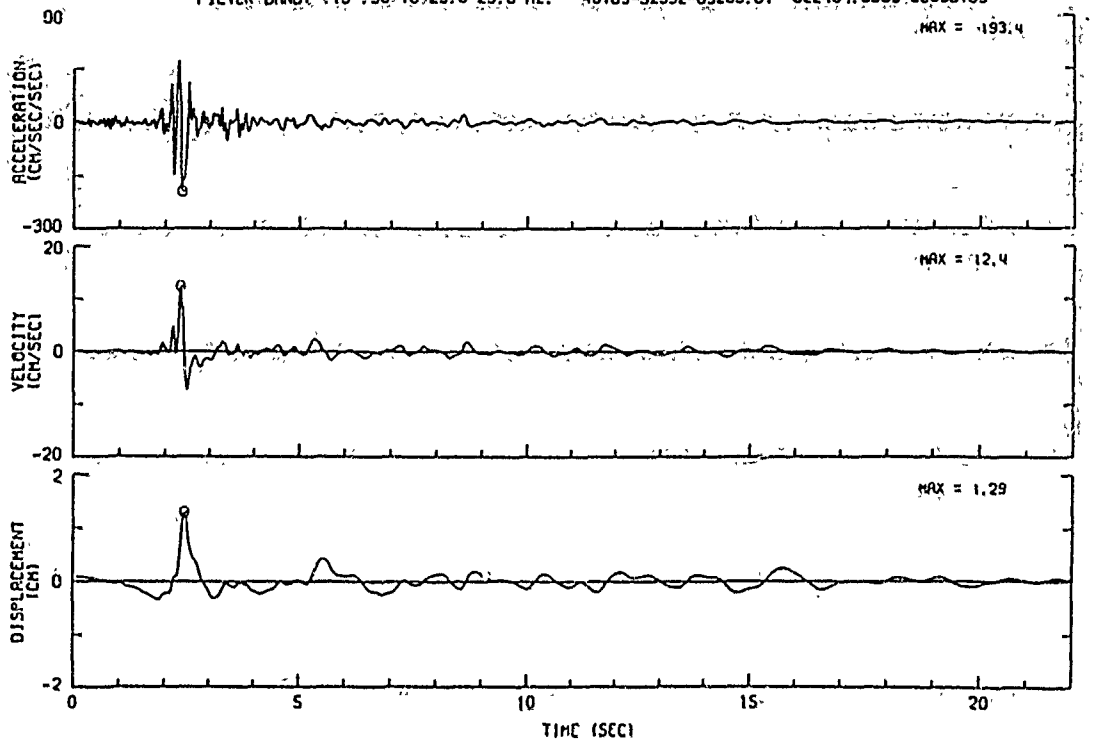
CDMG PRINTOUT

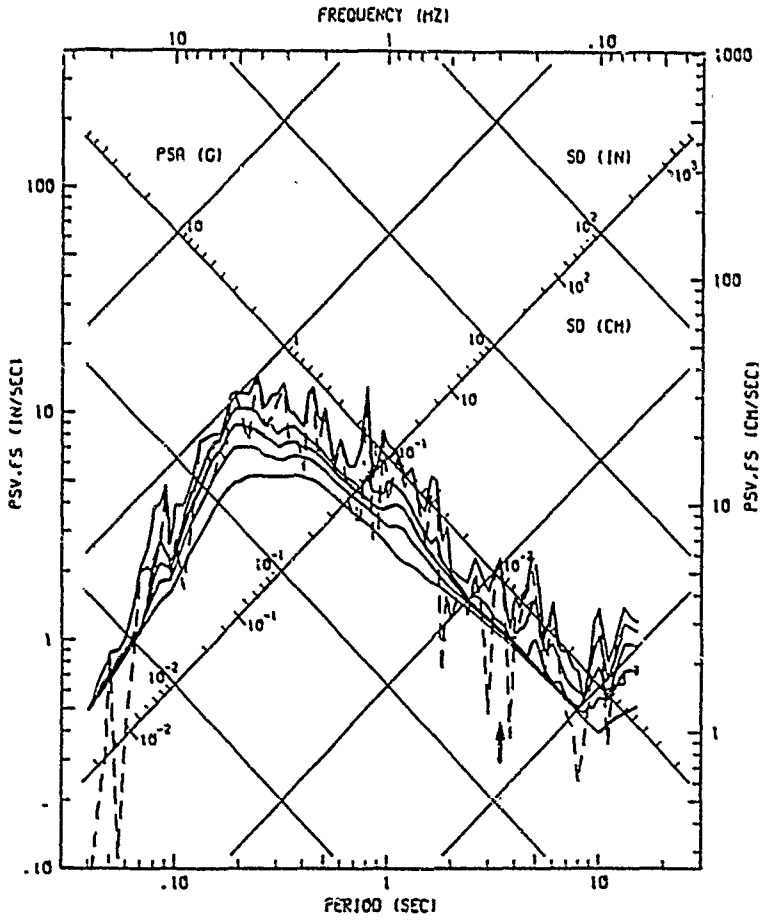
COALINGA AFTERSHOCK (EV#7)
COALINGA - CHP
CHN 3: 0 DEG
46T04-S4813-83209.01
022084.1855-0C83DT04

—— RESPONSE SPECTRA: PSV,PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0,2,5,10,20%

JULY 25, 1983 15:31 PDT

CAL 213



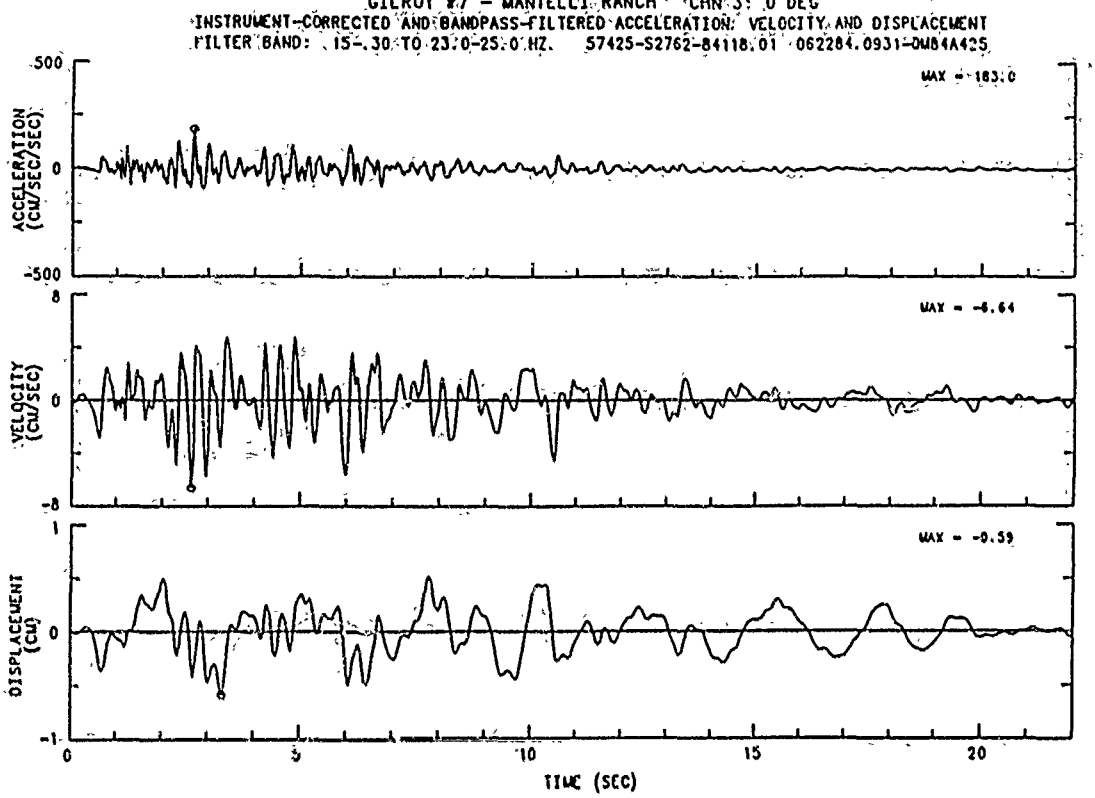


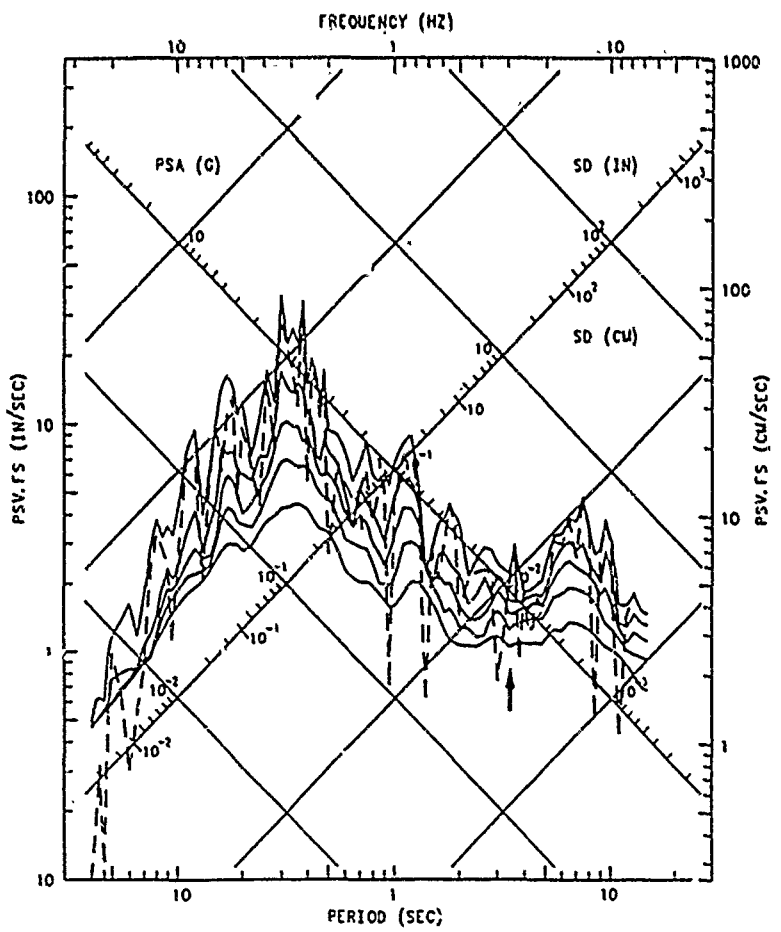
CDMG PRINTOUT

COALINGA AFTERSHOCK (EV#7)
COALINGA - SULPHUR BATHS
CHN 1. 90 DEG
46T03-S2S92-83209.01 022184.0710-0C830T03
—— RESPONSE SPECTRA: PSV,PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0.2.5.10.20%

JULY 25. 1983 15 31 PDT

CAL 214





CDMG OSMS 85-04

MORGAN HILL EARTHQUAKE

GILROY #7 - MANTELLI RANCH
CHN 3 0 DEG

ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT

05-.07 TO 23.0-25.0 HZ

57425-S2762-84118.01 061384 1147-CM84A425

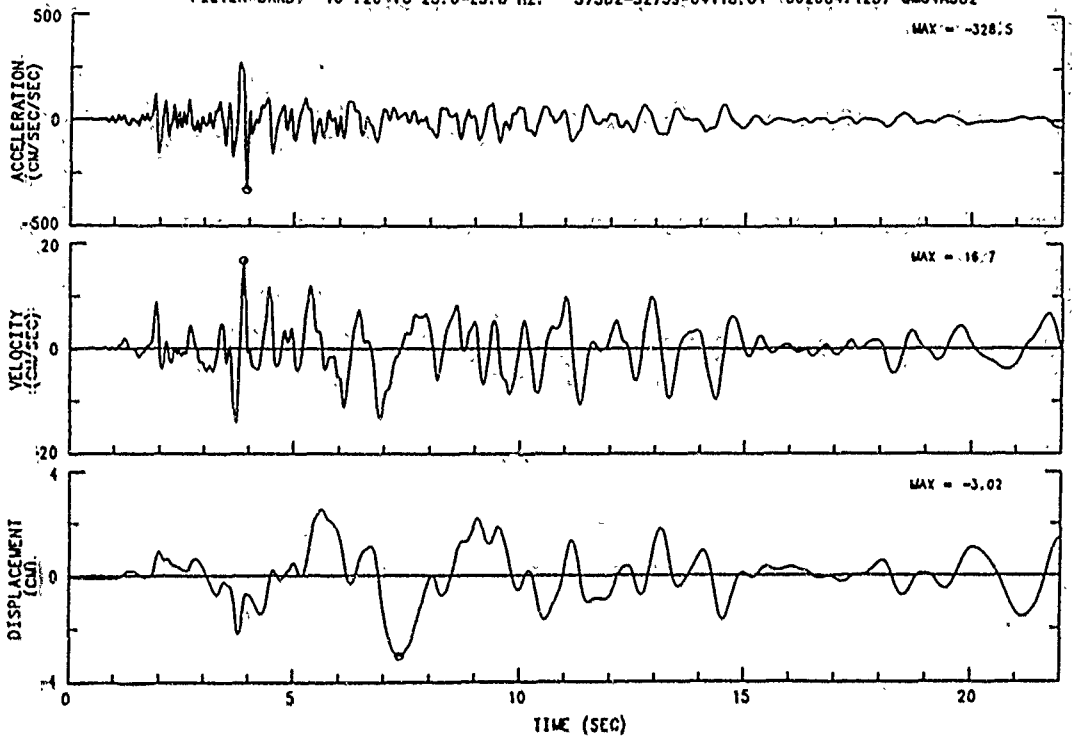
—— RESPONSE SPECTRA PSV, PSA & SD

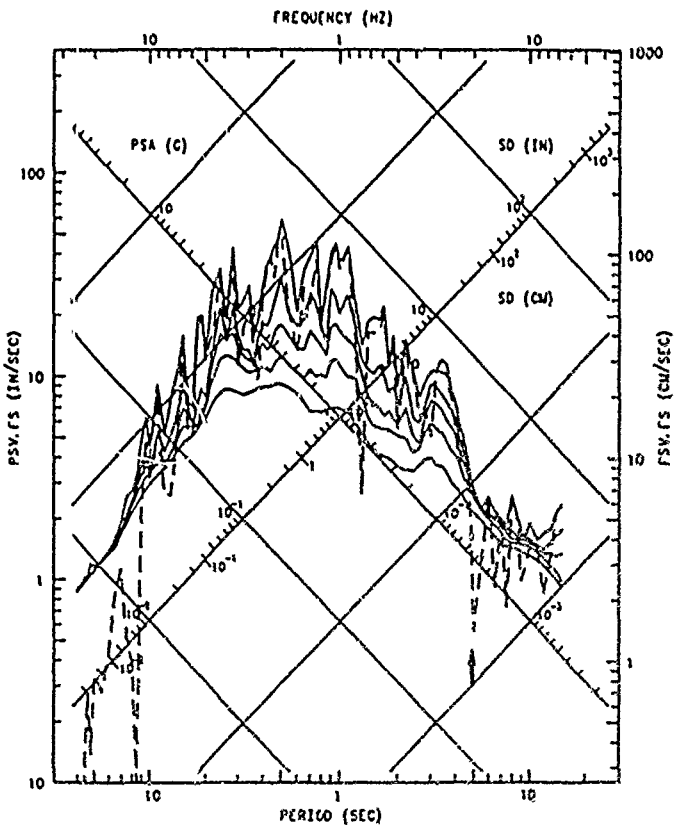
– – FOURIER AMPLITUDE SPECTRUM FS

DAMPING VALUES 0, 2, 5, 10, 20%

APRIL 24, 1984 13:15 PST

CAL 216



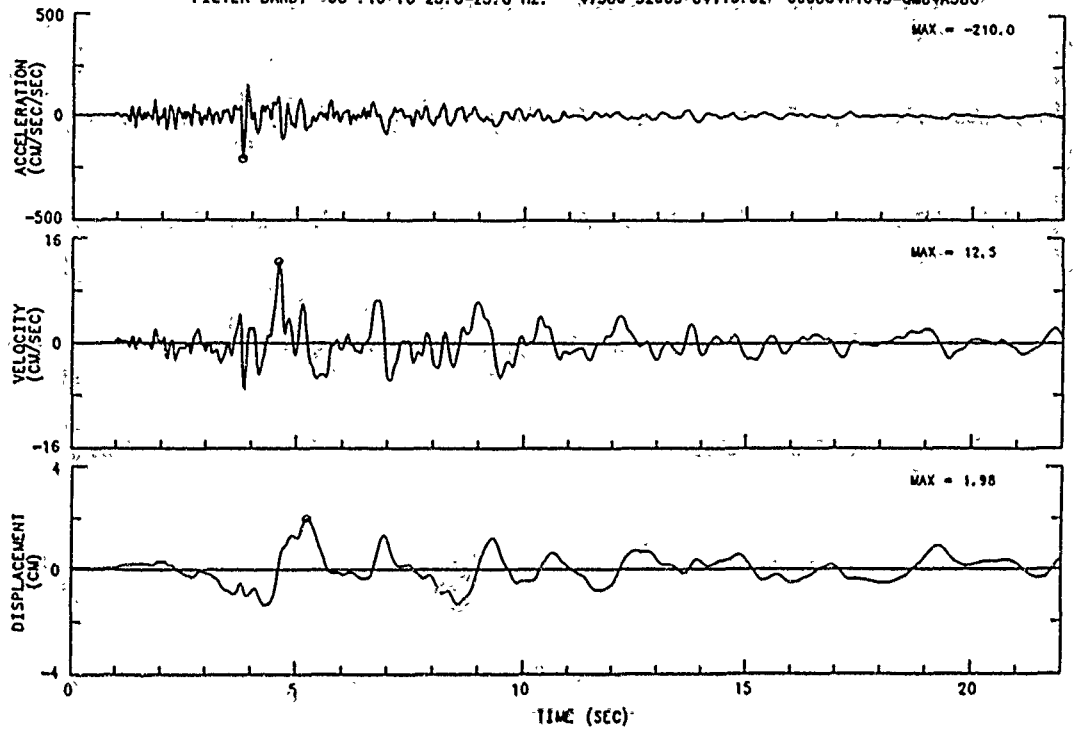


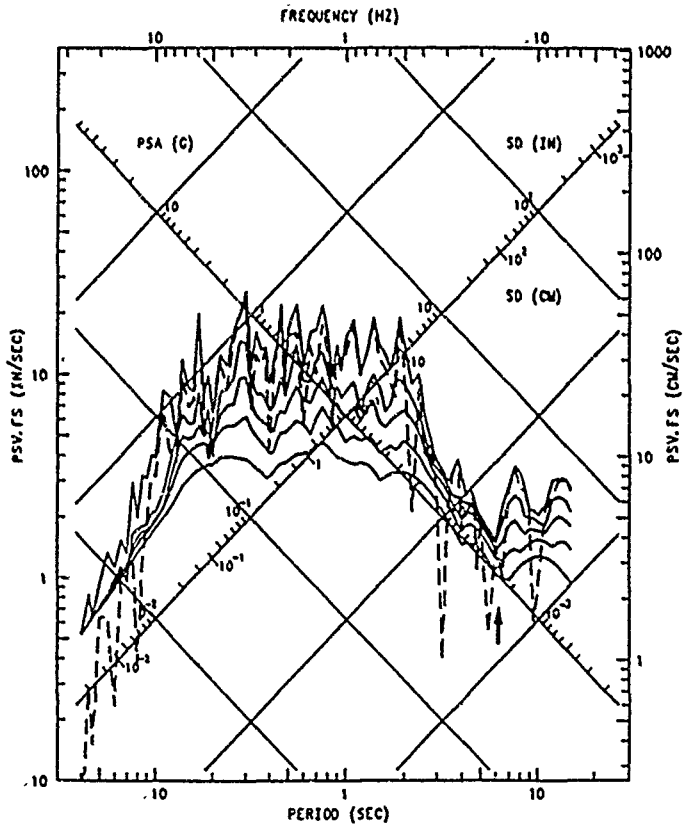
CDMG OSMS 85-04

GILROY #4 CHN 1: 360 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57382-S2759-84118.01
060684.1728-QM84A382
—— RESPONSE SPECTRA: PSV, PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

MORGAN HILL EARTHQUAKE
APRIL 24, 1984 13 15 PST

CAL 219



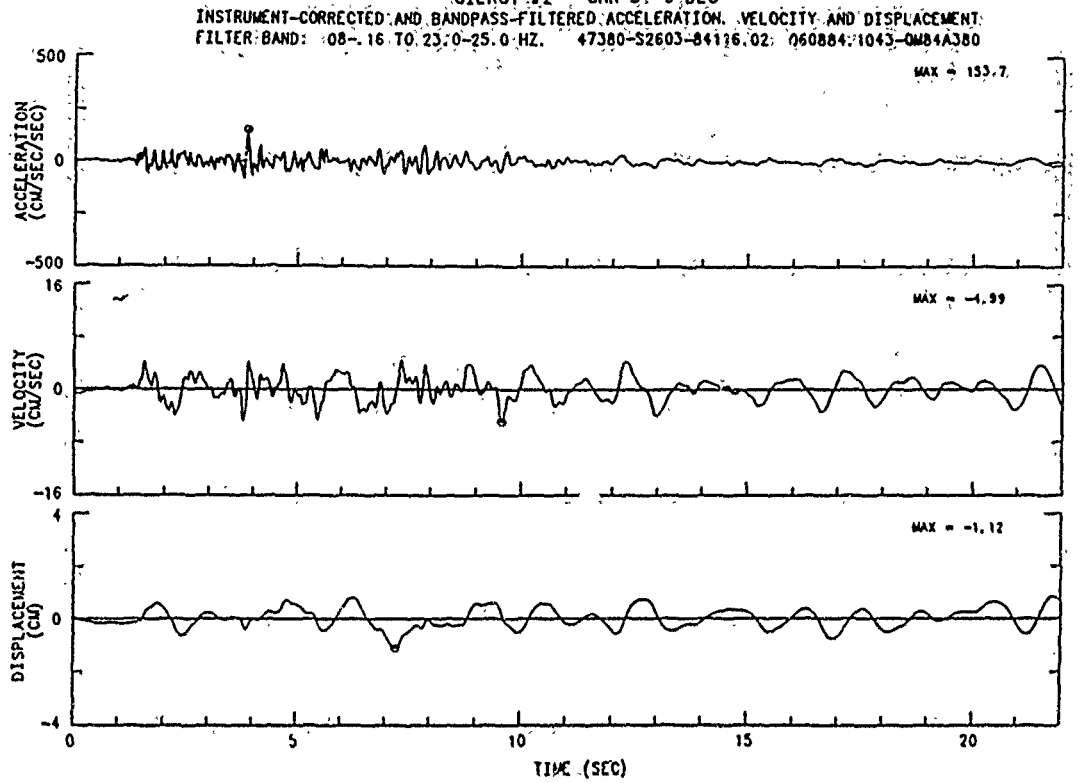


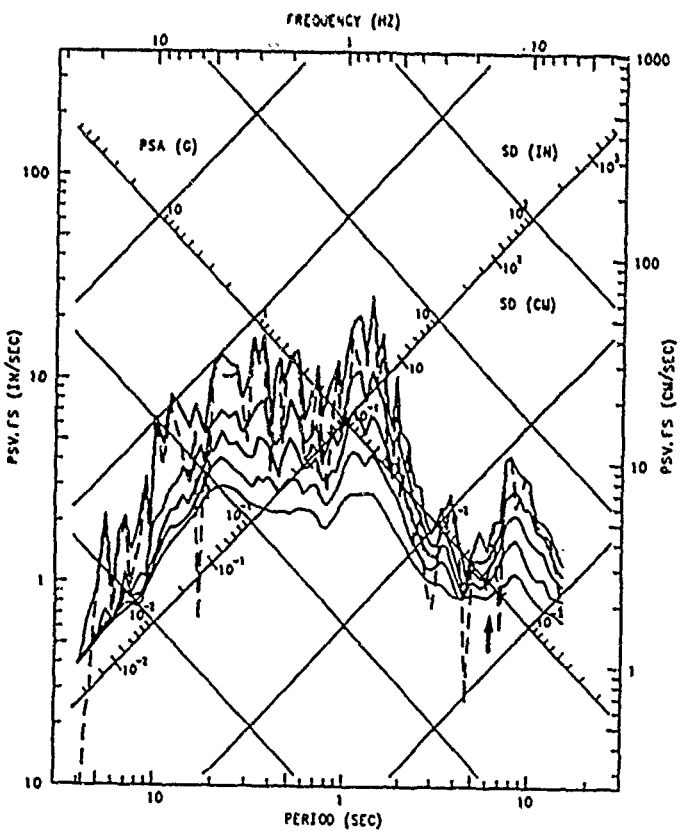
CDMG OSMS 85-04

CHN 1: 90 DEG GILROY #2
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47380-S2603-84116.02
061086.1110-QM84A380
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

MORGAN HILL EARTHQUAKE
APRIL 24, 1984 13:15 PST

CAL 223





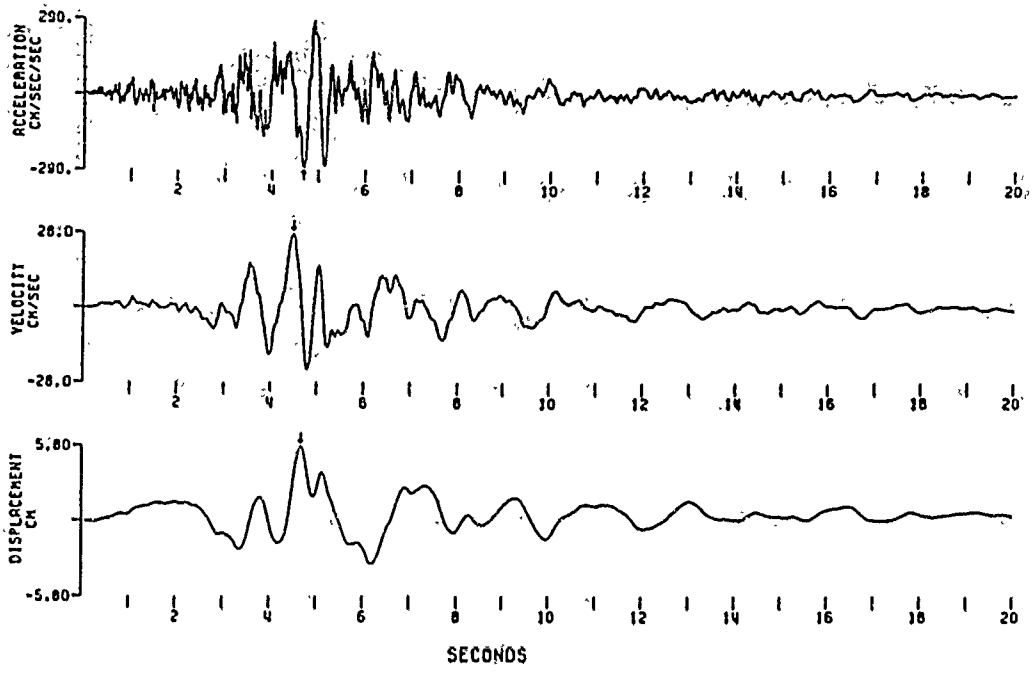
CDMG OSMS 85-04

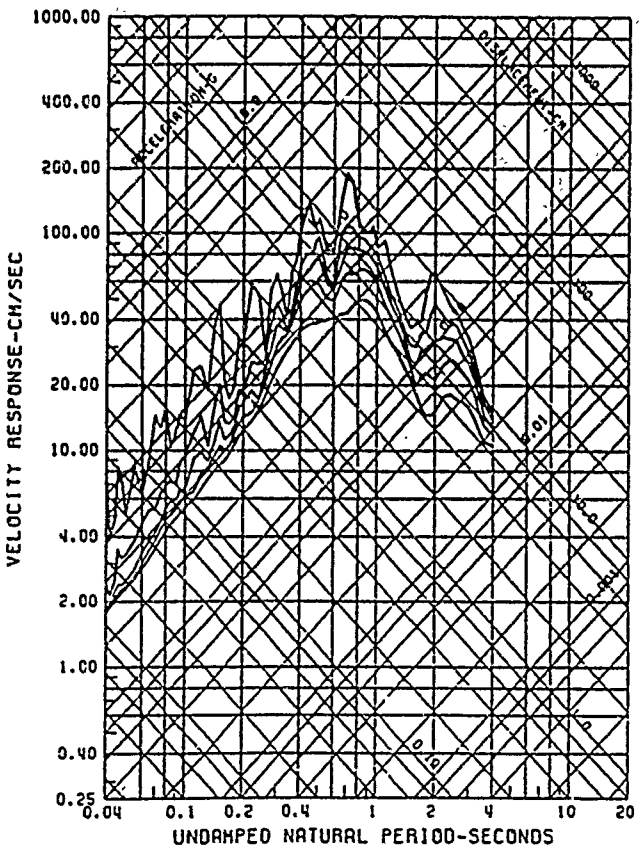
GILROY #2 CHN 3· 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
47380-S2603-84116.02
061086.1110-QM84A380
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM· FS
DAMPING VALUES: 0, 2, 5, 10, 20%

MORGAN HILL EARTHQUAKE
APRIL 24, 1984 13·15 PST

CAL 224

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
ANDERSON DAM - DOWNSTREAM
340 DEGREES
MT. HAMILTON EARTHQUAKE OF APRIL 24, 1984 2115 UTC
BUTTERWORTH FILTER AT 0.25 HZ, ORDER 8
PEAK VALUES: ACCEL=-283.43 CM/SEC/SEC, VELOCITY=27.59 CM/SEC, DISPL=5.75 CM



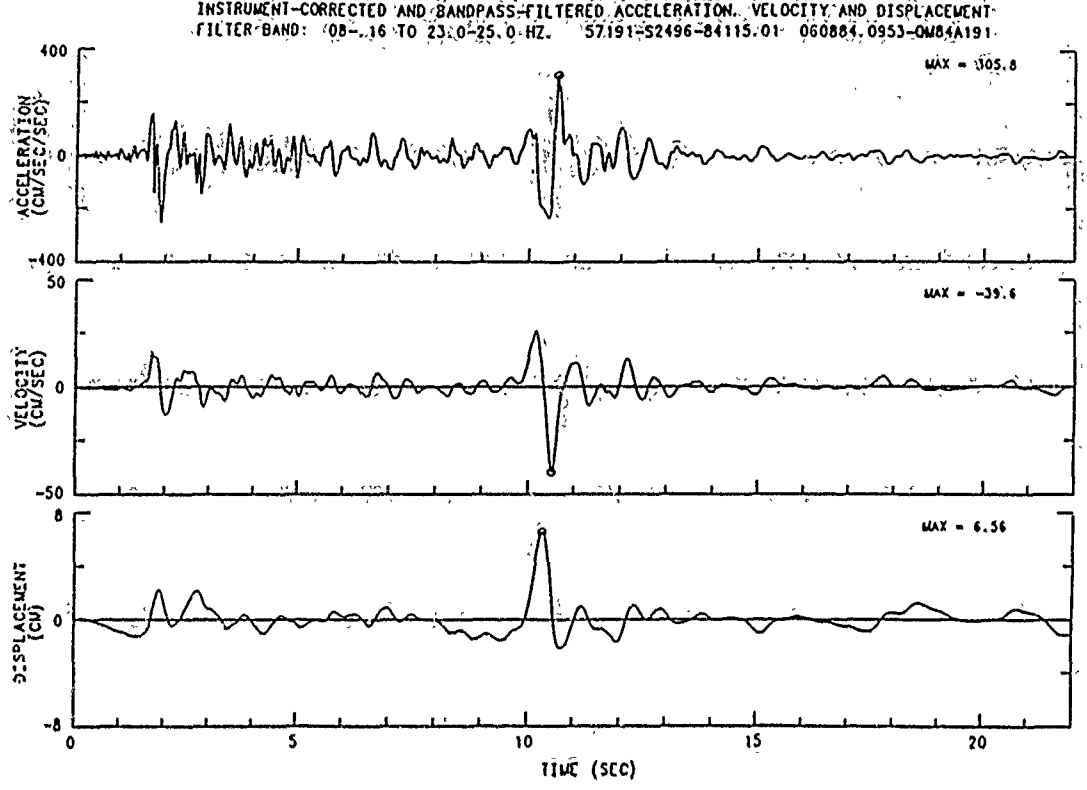


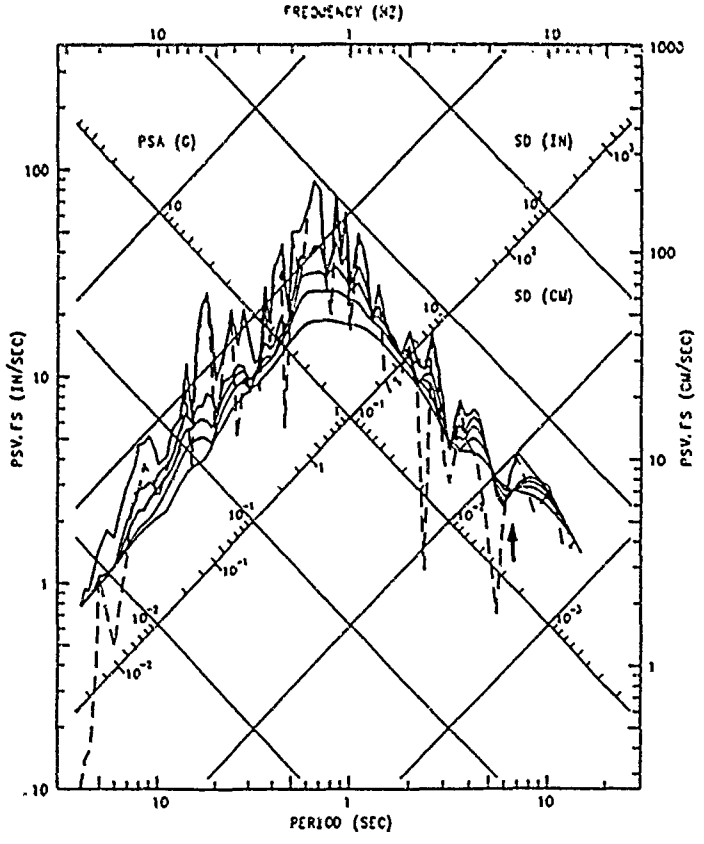
USGS OF 84-498

SEISMIC ENGINEERING BRANCH/USGS
FILTERS: BUTTERWORTH, ORDER 8
0.250 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

ANDERSON DAM - DOWNSTREAM
4/24/84, 2115UTC 340

CAL 225



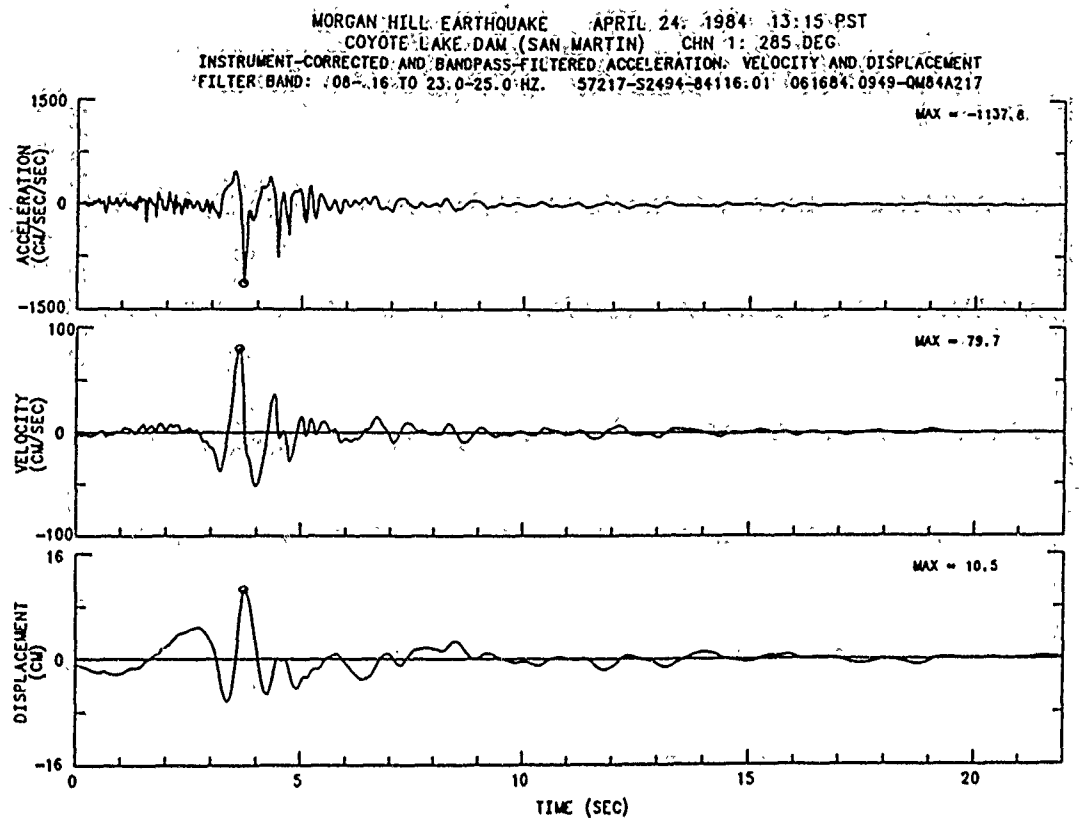


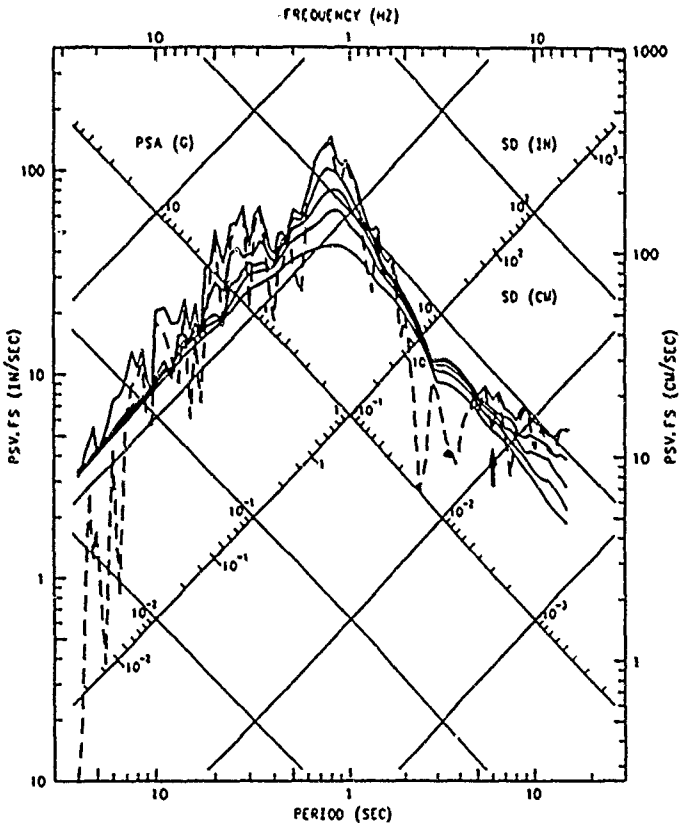
CDMG OSMS 85-04

HALLS VALLEY
CHN 1. 240 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT 05-.07 TO 23.0-25.0 HZ.
57191-S2496-84115.01
060684.1457-OM84A191
—— RESPONSE SPECTRA PSV.PSA & SD
— — FOURIER AMPLITUDE SPECTRUM FS
DAMPING VALUES 0.2.5.10.20%

MORGAN HILL EARTHQUAKE
APRIL 24. 1984 13:15 PST

CAL 227



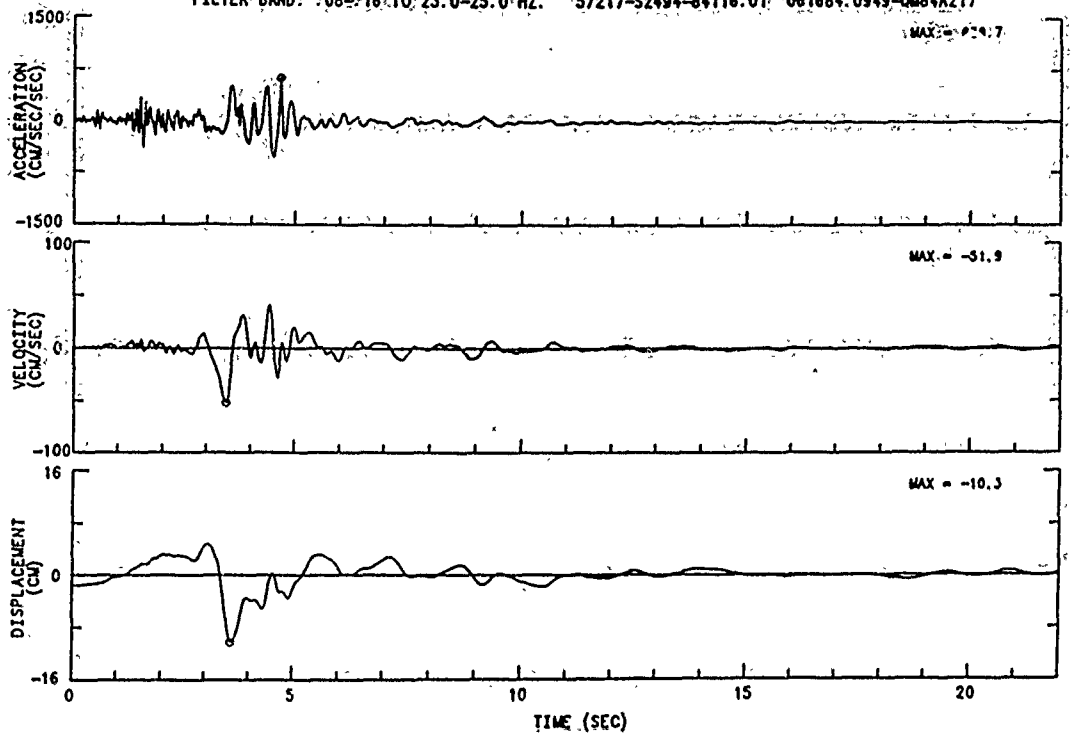


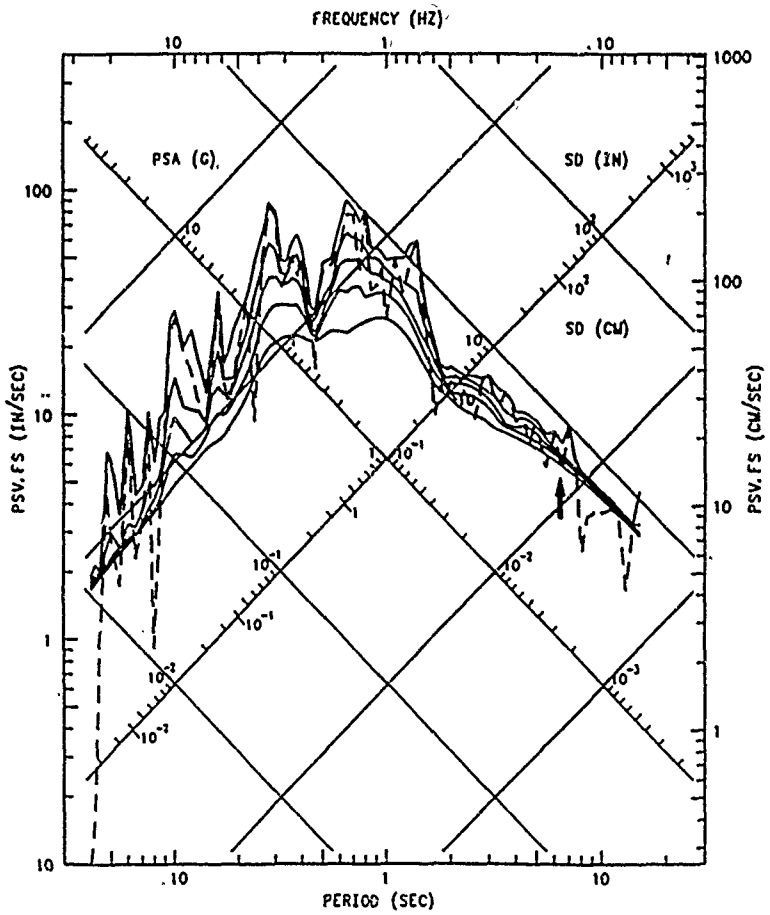
CDMG OSMS 85-04

COYOTE LAKE DAM (SAN MARTIN)
CHN 1: 285 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57217-S2494-84116.01
061484.1641-QM84A217
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

MORGAN HILL EARTHQUAKE
APRIL 24, 1984 13:15 PST

CAL 228



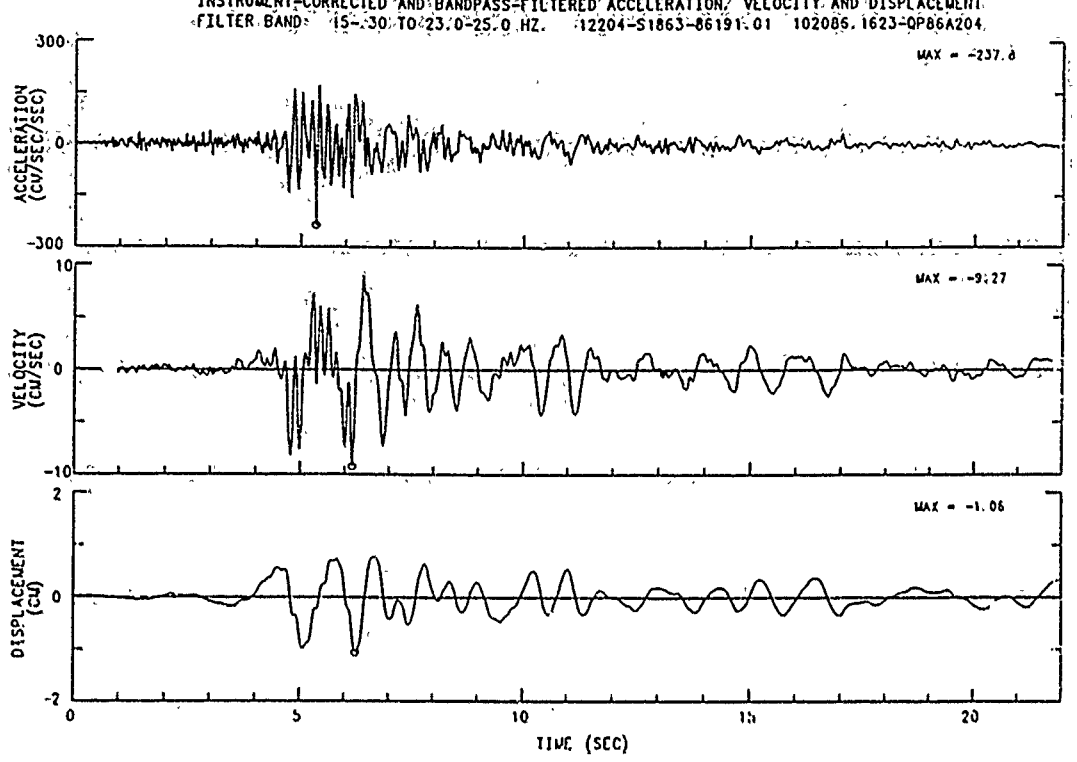


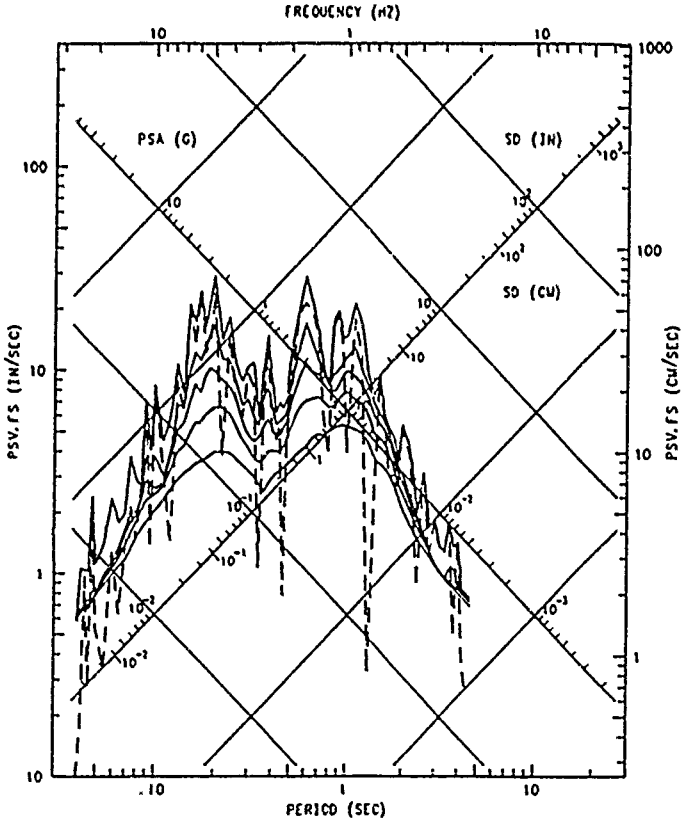
CDMG OSMS 85-04

COYOTE LAKE DAM (SAN MARTIN)
CHN 3 195 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.07 TO 23.0-25.0 HZ.
57217-S2494-84116.01
061484.1641-QM84A217
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

MORGAN HILL EARTHQUAKE
APRIL 24, 1984 13:15 PST

CAL 229



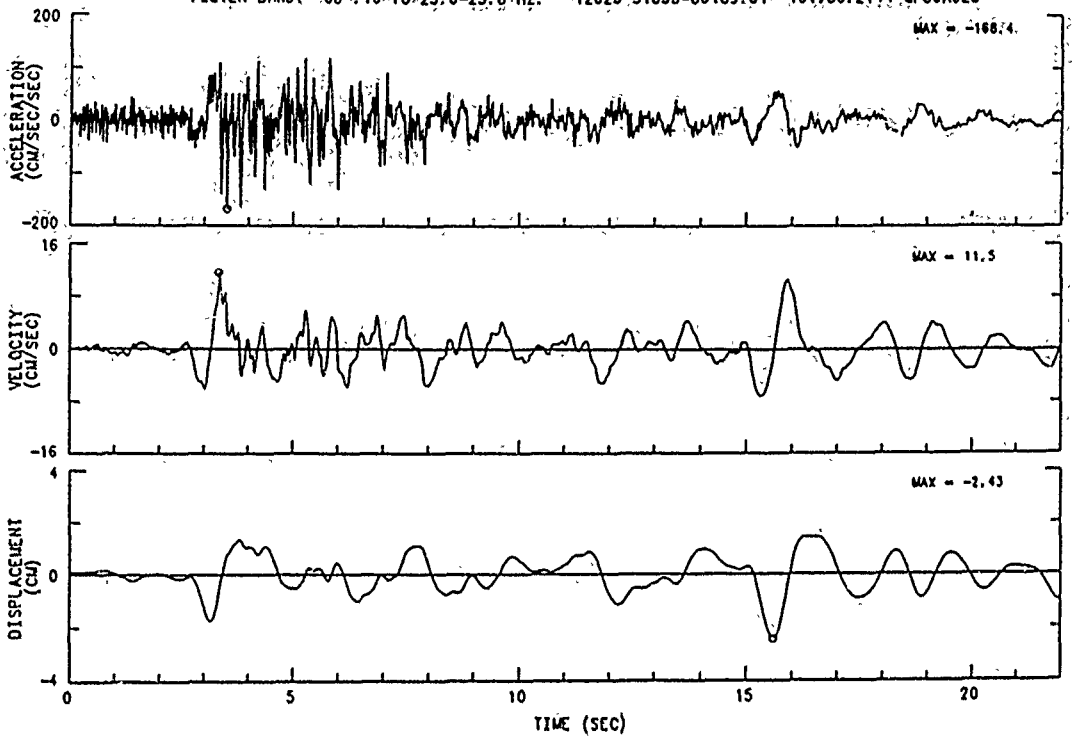


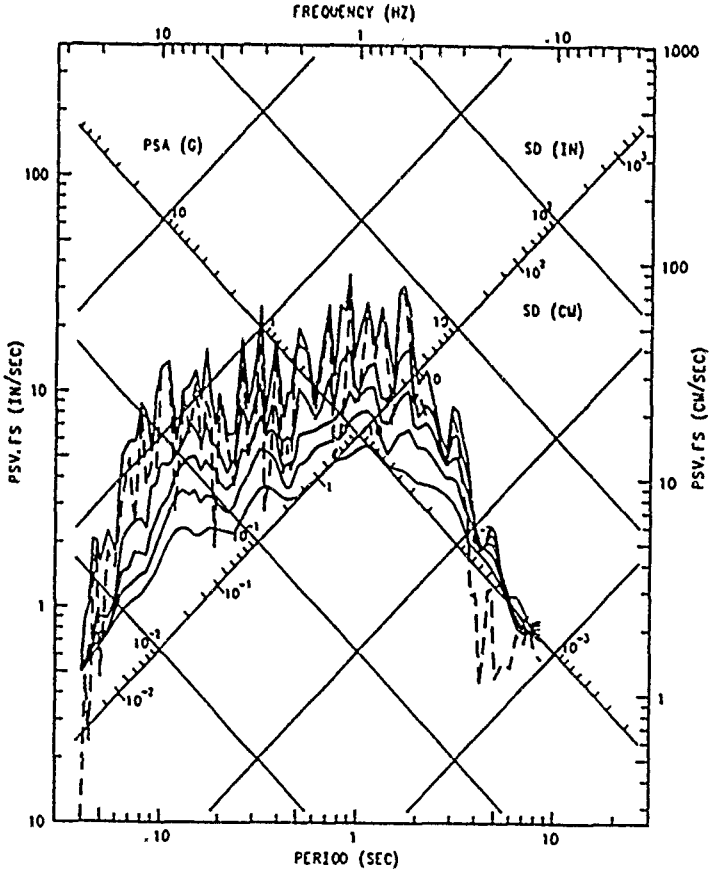
CDMG OSMS 87-01

SAN JACINTO - SOBOBA
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .15-.30 TO 23.0-25.0 HZ.
110386.1604-QP86A204
12204-S1863-86191.01
—— RESPONSE SPECTRA: PSV, PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

PALM SPRINGS EARTHQUAKE
JULY 8, 1986 02:20 PDT

CAL 232





CDMG OSMS 87-01

PALM SPRINGS - AIRPORT
CHN 1: 90 DEG

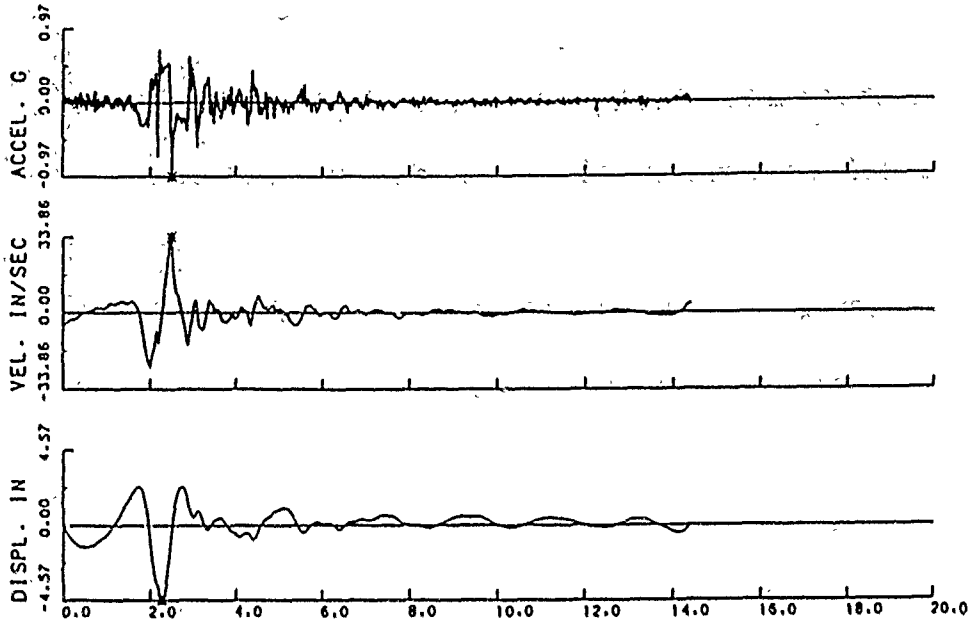
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
12025-S1833-86189.01
101786.2208-QP86A025

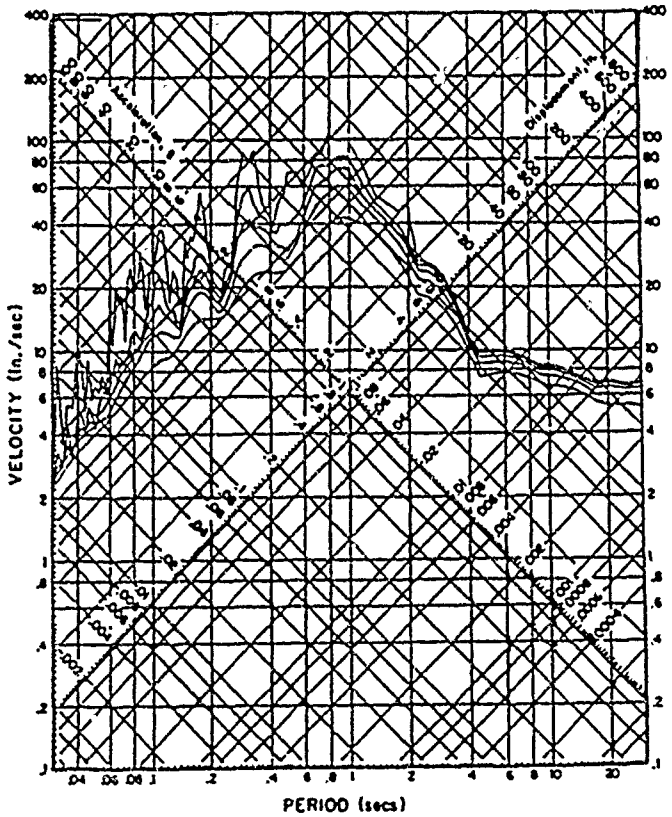
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

PALM SPRINGS EARTHQUAKE
JULY 8, 1986 02:20 PDT

CAL 236

TIME HISTORY ANALYSIS OF DEVERS RECORD, JULY 8,86 EARTHQUAKE. 7/23/86
SCE15 - DEVERS SUBSTATION
COORDINATES LAT 33.93 LONG 116.58
INSTRUMENT ORIENTATION LATERAL N TRANSVERSE W
COMPONENT OF MOTION LONGITUDINAL
PEAK VALUES, ACCEL = -0.97 G VEL =33.86 IN/SEC DISPL = -4.57 IN

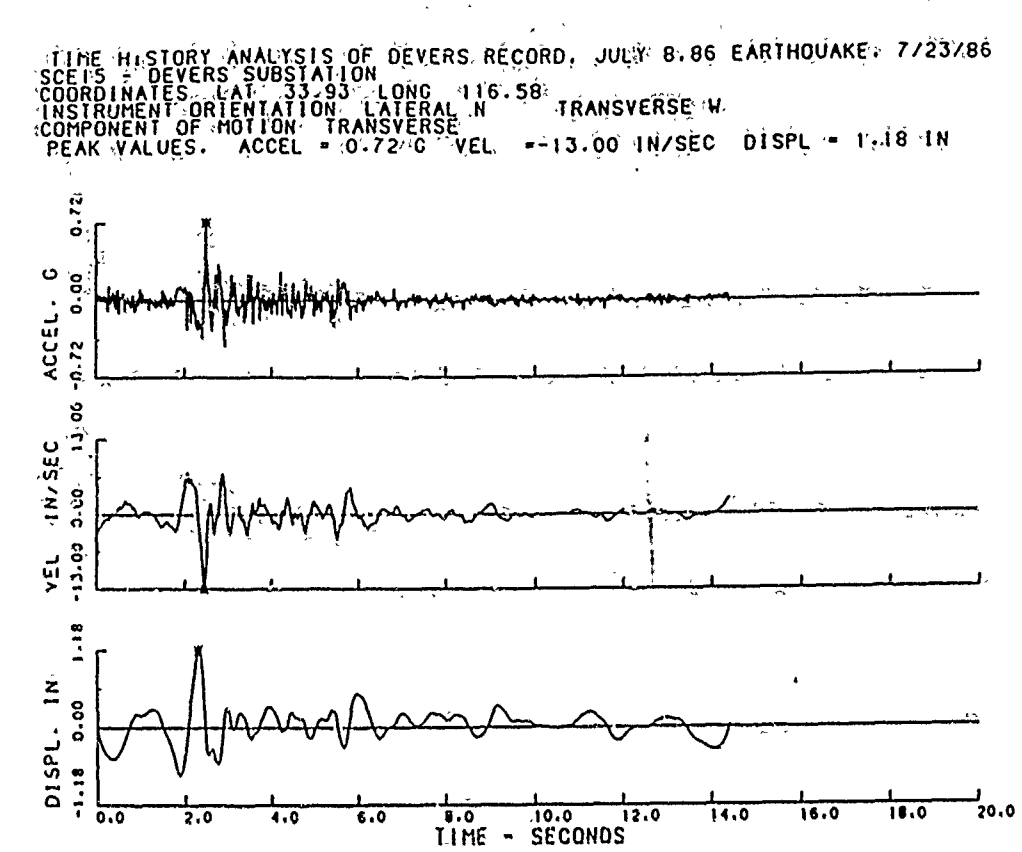


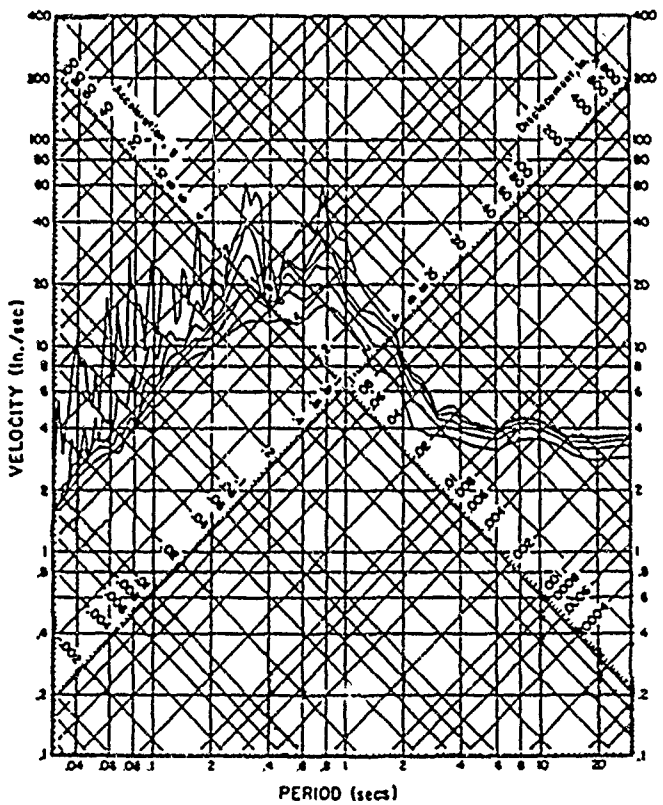


SO CAL EDISON CO

TIME HISTORY ANALYSIS
OF DEVERS RECORD, JULY
SCE15 - DEVERS SUBSTATIOI
LAT 33.93 LONG 116.58
INSTRUMENT ORIENTATION
LATERAL N TRANSVER
COMPONENT OF MOTION
LONGITUDINAL

CAL 243

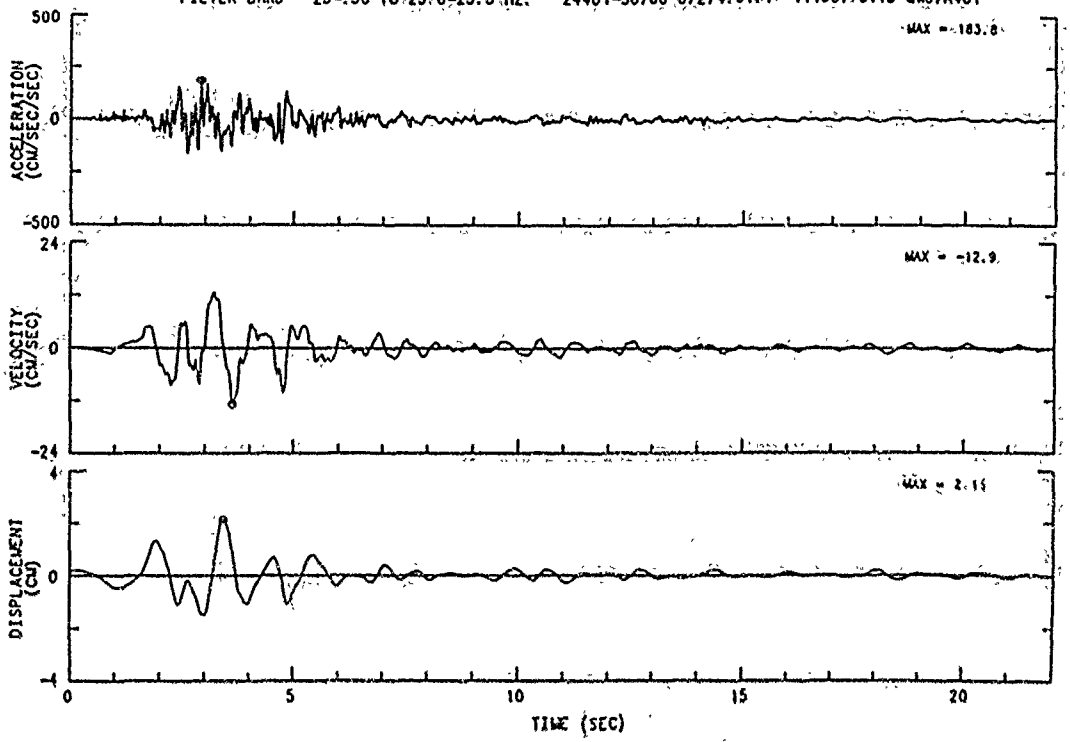


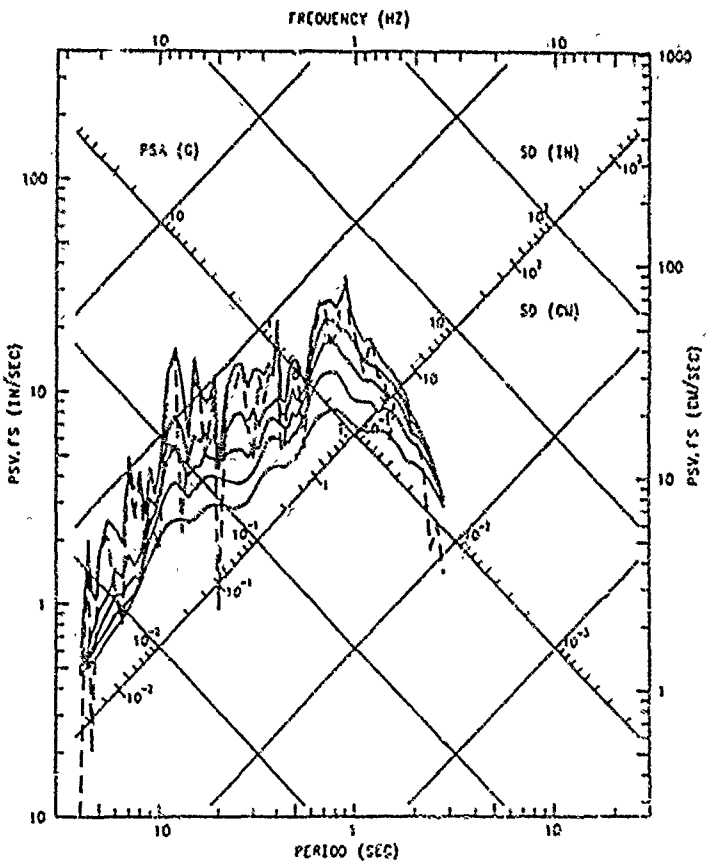


SO CAL EDISON CO

TIME HISTORY ANALYSIS
OF DEVERS RECORD. JULY 8.8
SCE15 - DEVERS SUBSTATION
LAT 33.93 LONG 116.58
INSTRUMENT ORIENTATION
LATERAL N TRANSVERSE
COMPONENT OF MOTION
TRANSVERSE

CAL 244



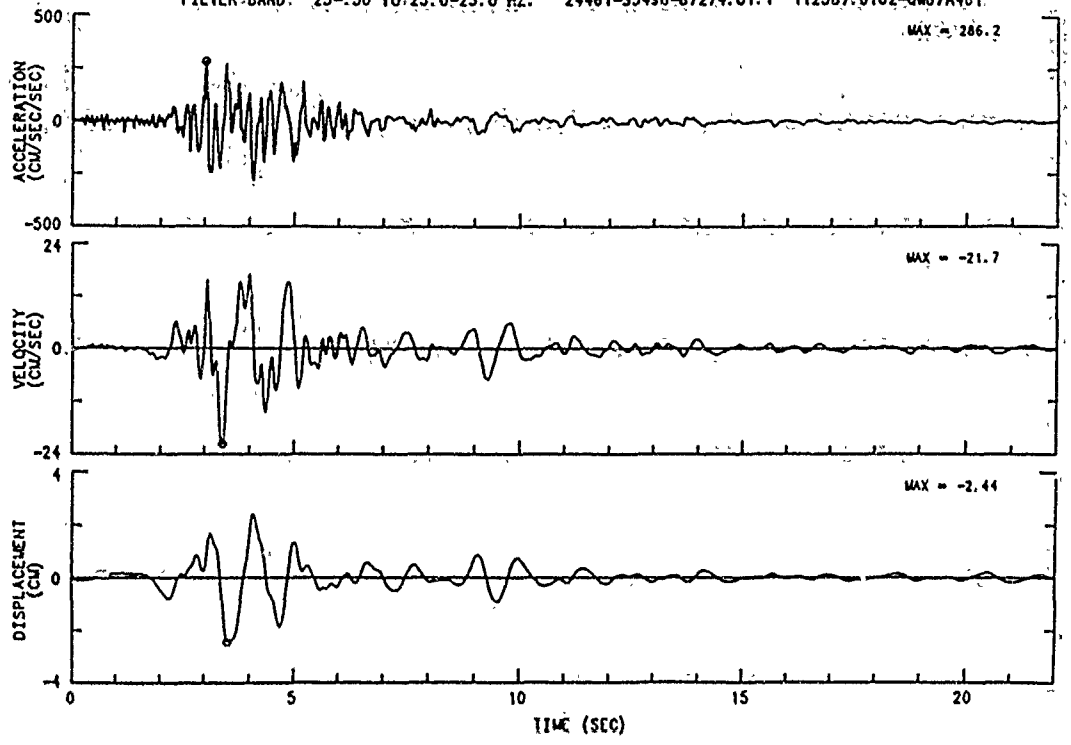


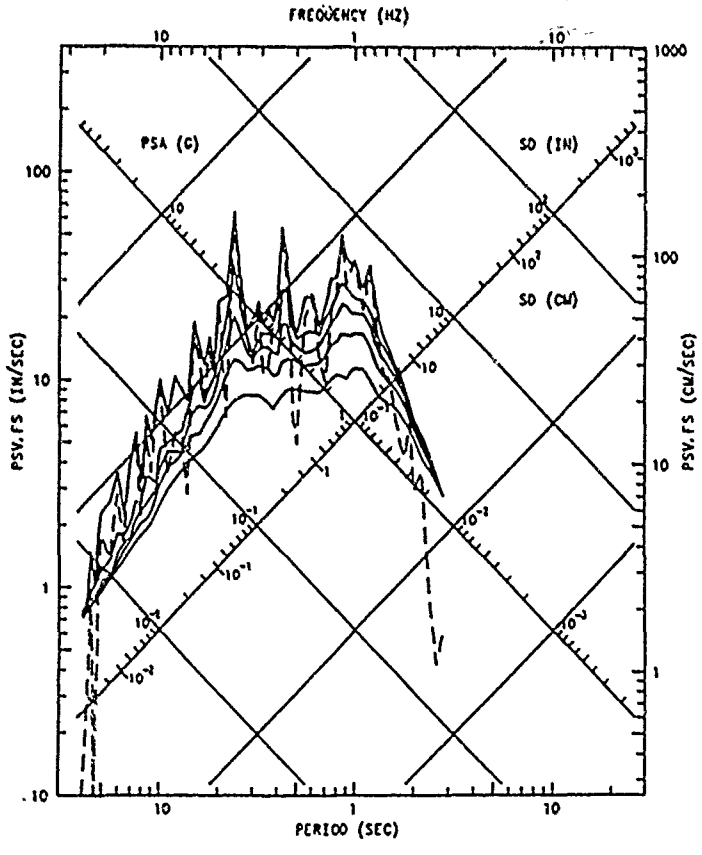
CDMG PRINTOUT

SAN MARINO - SOUTHWESTERN ACADEMY
CHN 1, 360 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .25-.50 TO 23.0-25.0 HZ.
112387 1513-CW87A401
24401-S0760-87274.01.1
—— RESPONSE SPECTRA PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM FS
DAMPING VALUES: 0, 2, 5, 10, 20%

WHITTIER EARTHQUAKE
OCTOBER 1, 1987 07 42 PDT

CAL 247



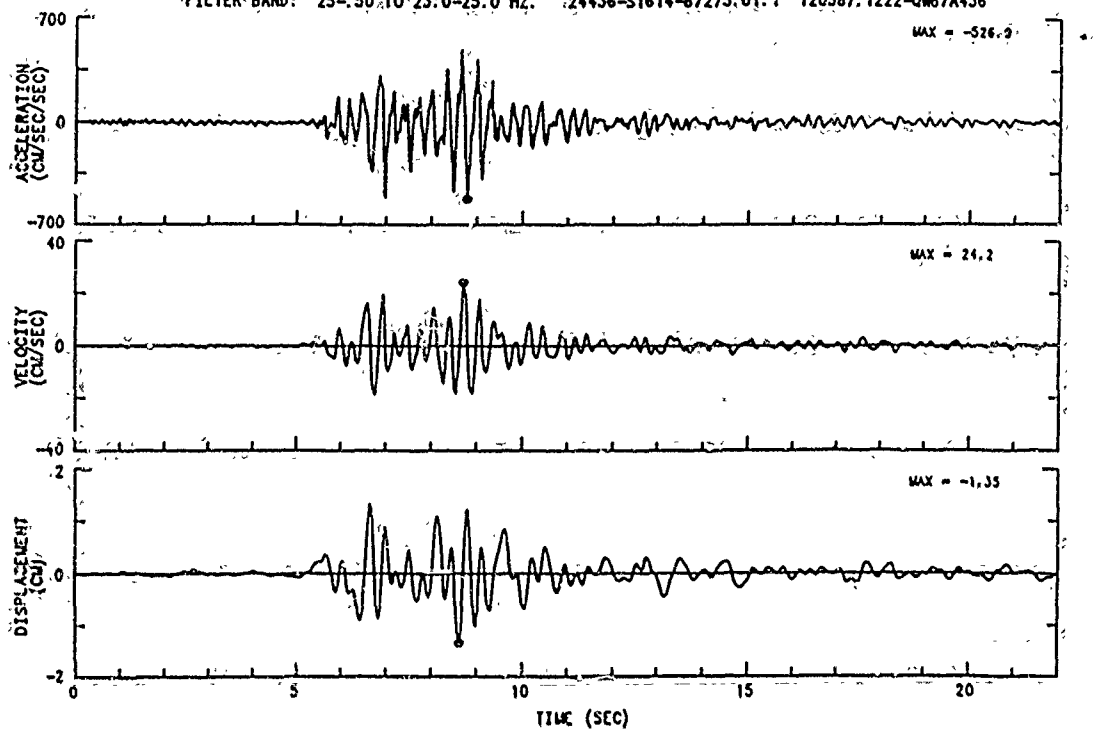


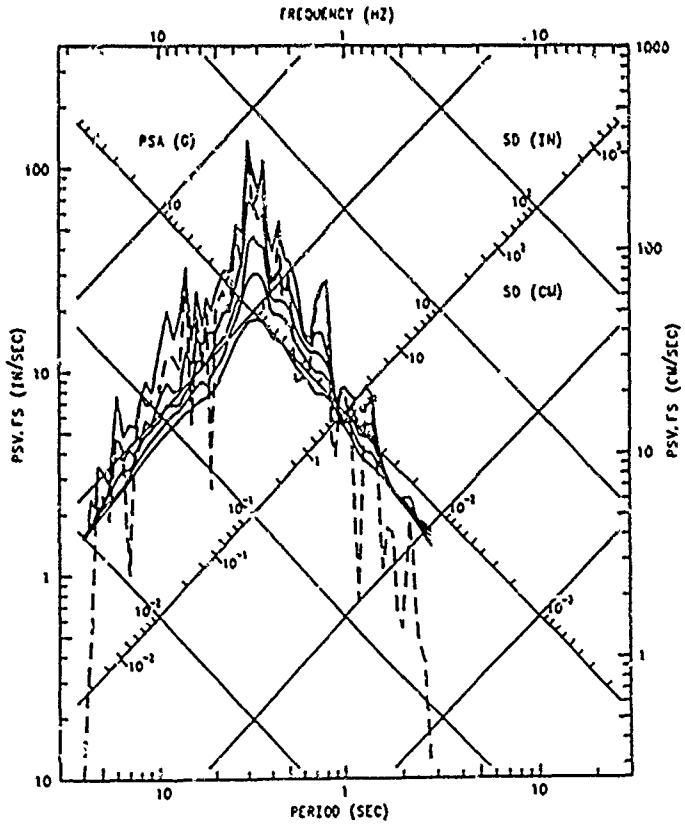
CDMG PRINTOUT

ALHAMBRA - FREMONT SCHOOL
CHN 3: 180 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .25-.50 TO 23.0-25.0 HZ.
24461-S3498-87274.01.1
120387.1426-QW87A461
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

WHITTIER EARTHQUAKE
OCTOBER 1, 1987 07 42 PDT

CAL 253



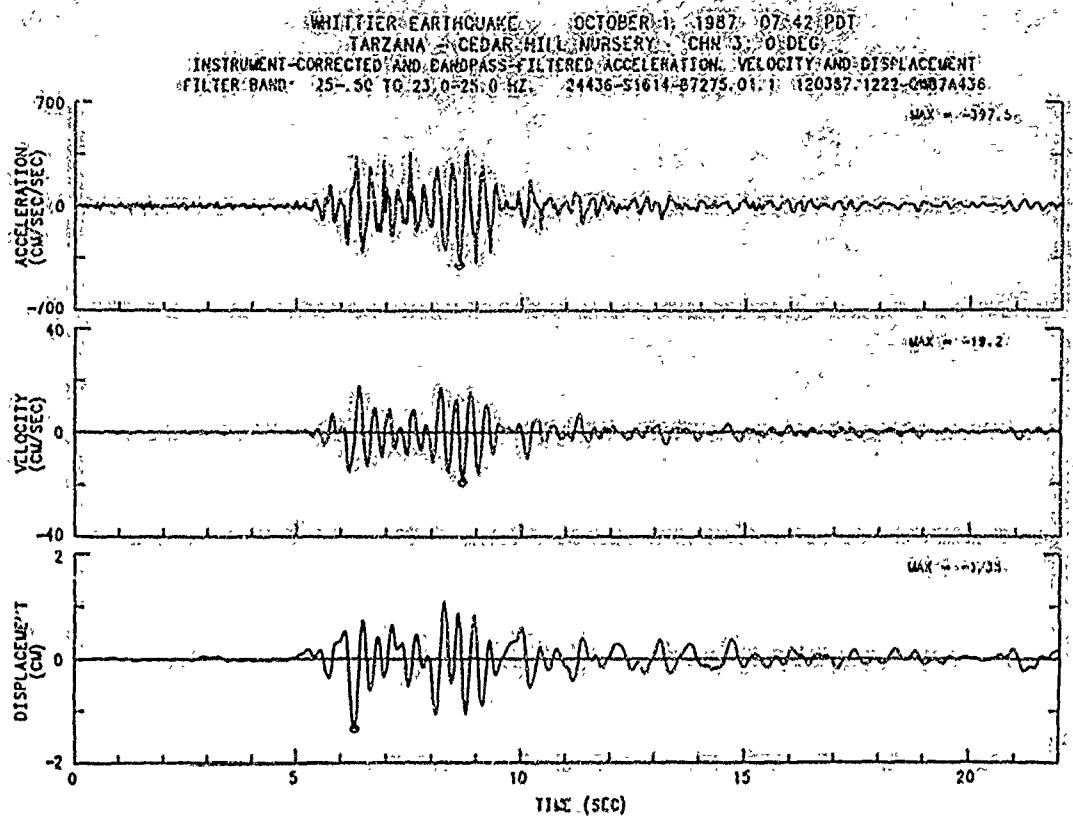


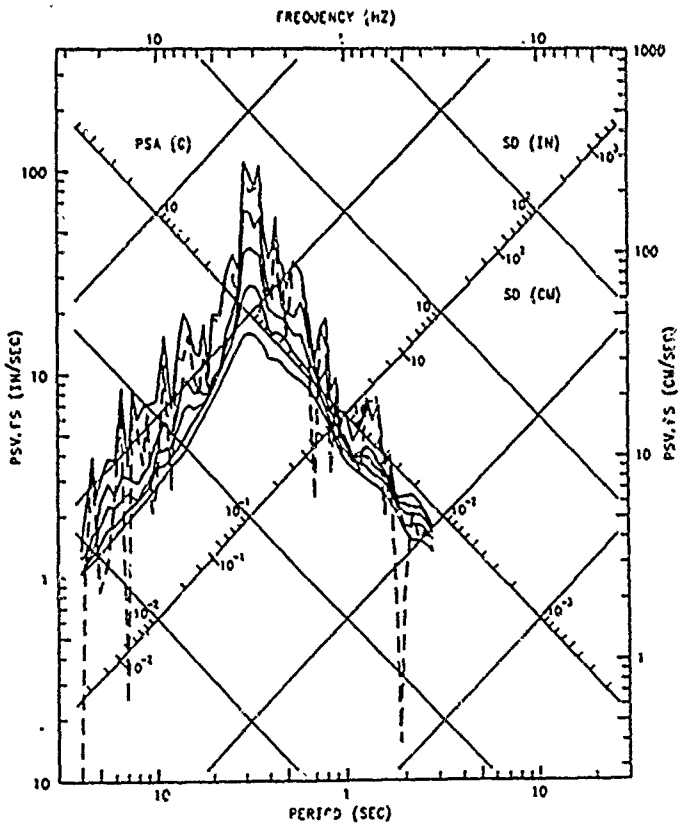
CDMG [illegible]NTOUT

TARZANA - CEDAR HILL NURSERY
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .25-.50 TO 23.0-25.0 HZ.
24436-S1614-87275.01.1
120387.1235-QW87A436
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

WHITTIER EARTHQUAKE
OCTOBER 1, 1987 07 42 PDT

CAL 270



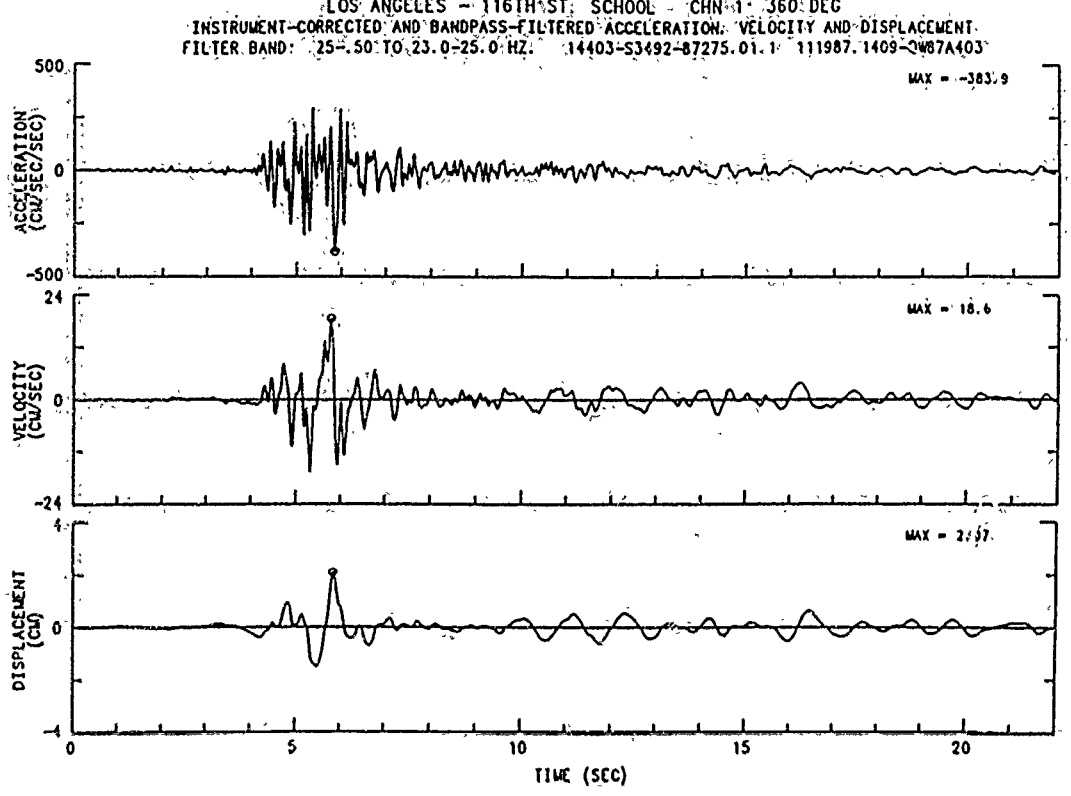


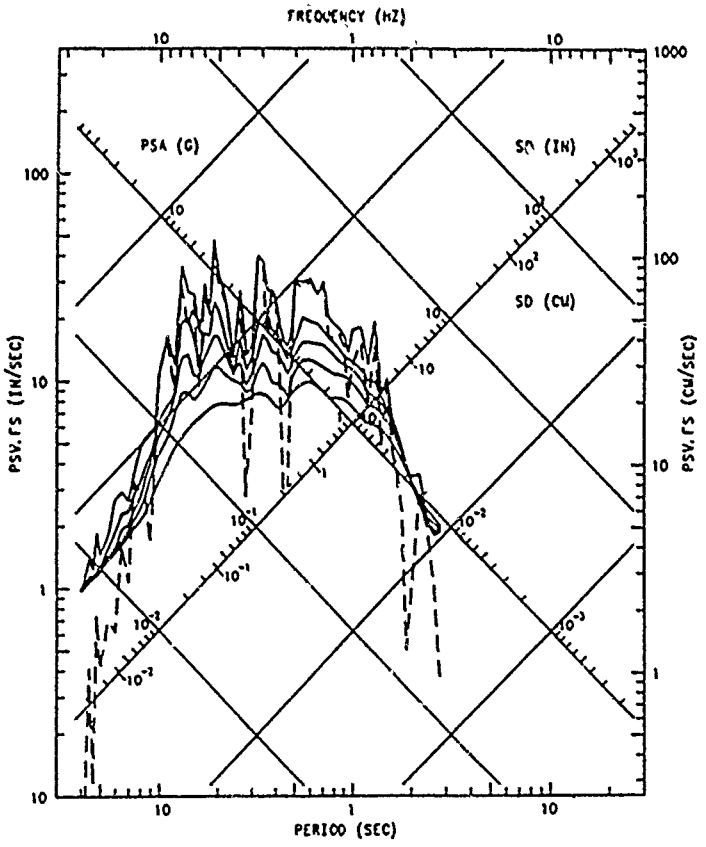
CDMG PRINTOUT

TARZANA - CEDAR HILL NURSERY
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .25-.50 TO 23.0-25.0 HZ.
24436-S1614-87275.01.1
120387.1235-QW87A436
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

WHITTIER EARTHQUAKE
OCTOBER 1, 1987 07:42 PDT

CAL 271



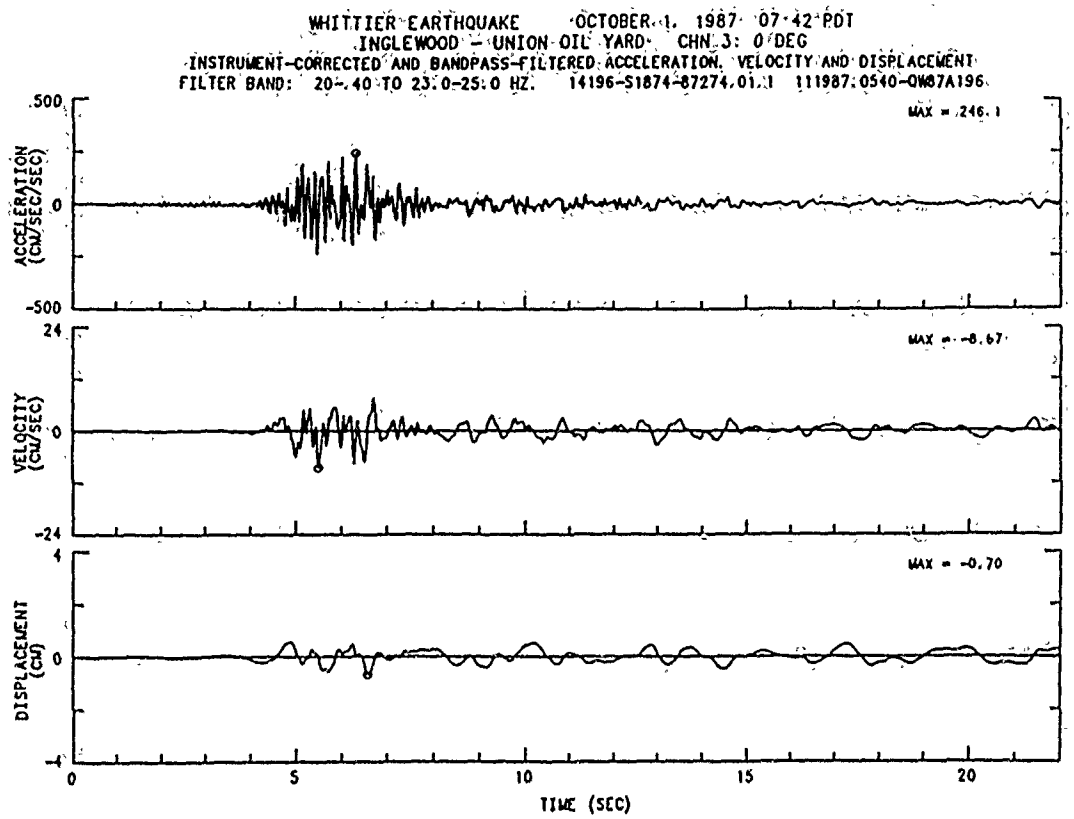


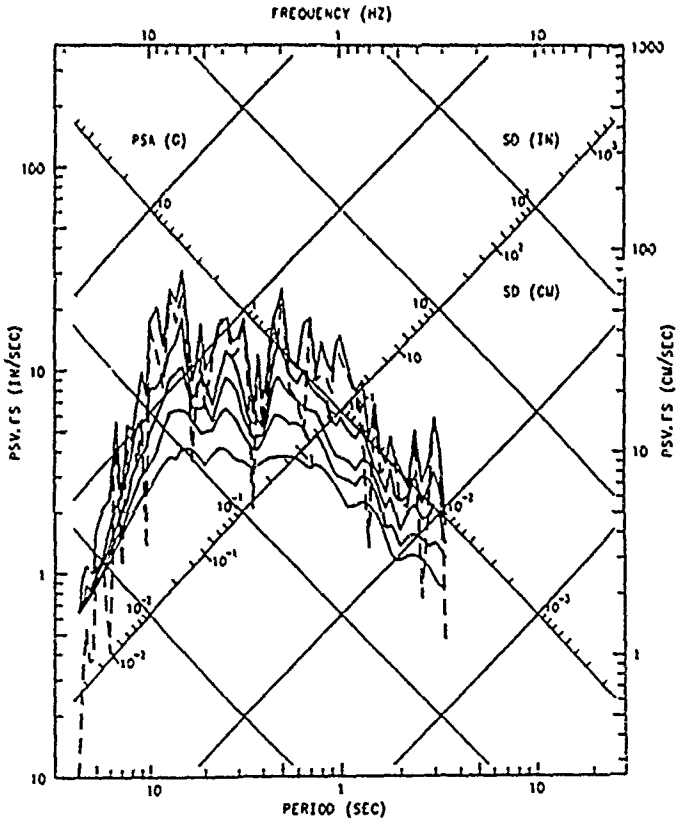
CDMG PRINTOUT

LOS ANGELES - 116TH ST. SCHOOL
CHN 1: 360 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .25-.50 TO 23.0-25.0 HZ.
14403-S3492-87275.01.1
121587.1654-QW87A403
—— RESPONSE SPECTRA: PSV, PSA & S
— — FOURIER AMPLITUDE SPECTRUM: F
DAMPING VALUES: 0, 2, 5, 10, 20%

WHITTIER EARTHQUAKE
OCTOBER 1, 1987 07:42 PDT

CAL 272



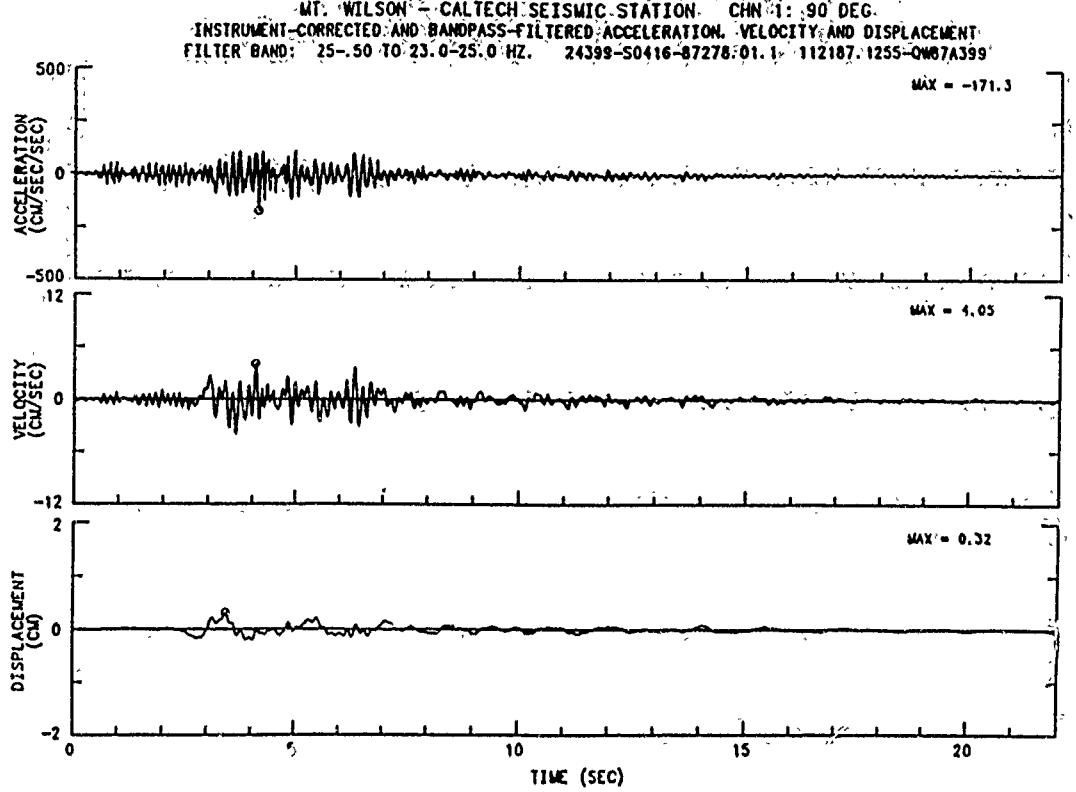


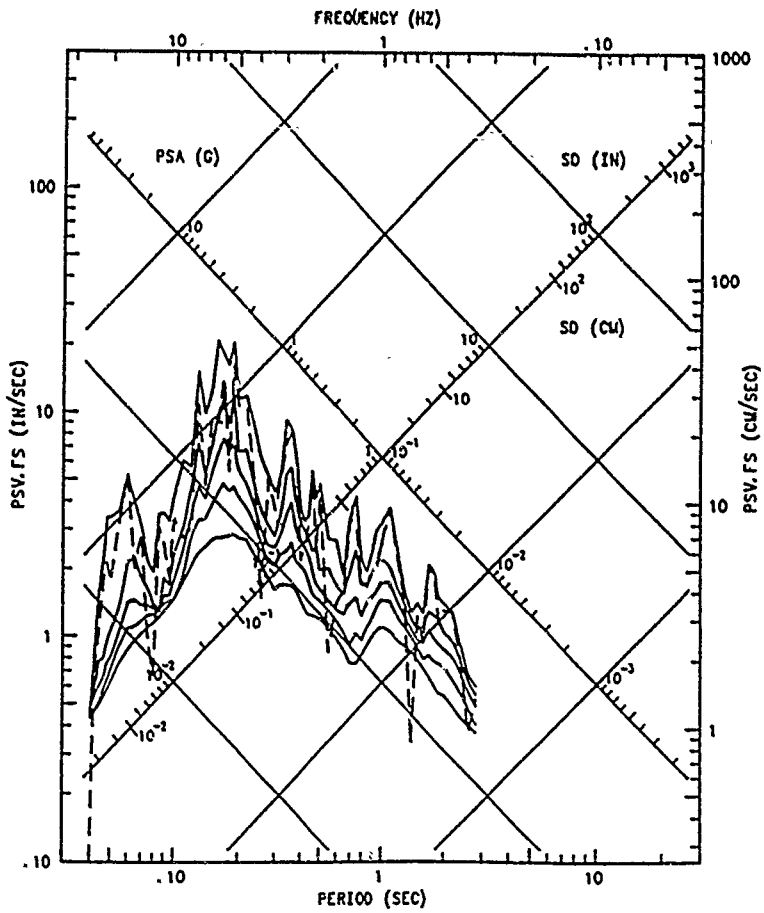
CDMG PRINTOUT

INGLEWOOD - UNION OIL YARD
CHN 3· 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .20-.40 TO 23.0-25.0 HZ.
14196-S1874-87274.01.1
112387.1631-QW87A196
—— RESPONSE SPECTRA· PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM· FS
DAMPING VALUES· 0, 2, 5, 10, 20%

WHITTIER EARTHQUAKE
OCTOBER 1, 1987 07·42 PDT

CAL 275





CDMG PRINTOUT

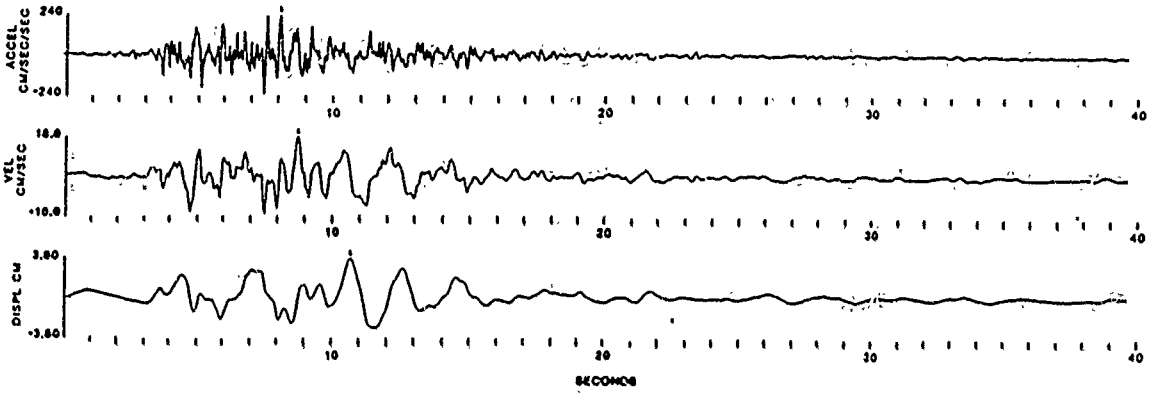
MT. WILSON
CALTECH SEISMIC STATION
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .25-.50 TO 23.0-25.0 HZ.
24399-S0416-87278.01.1
121587.1855-QW87A399

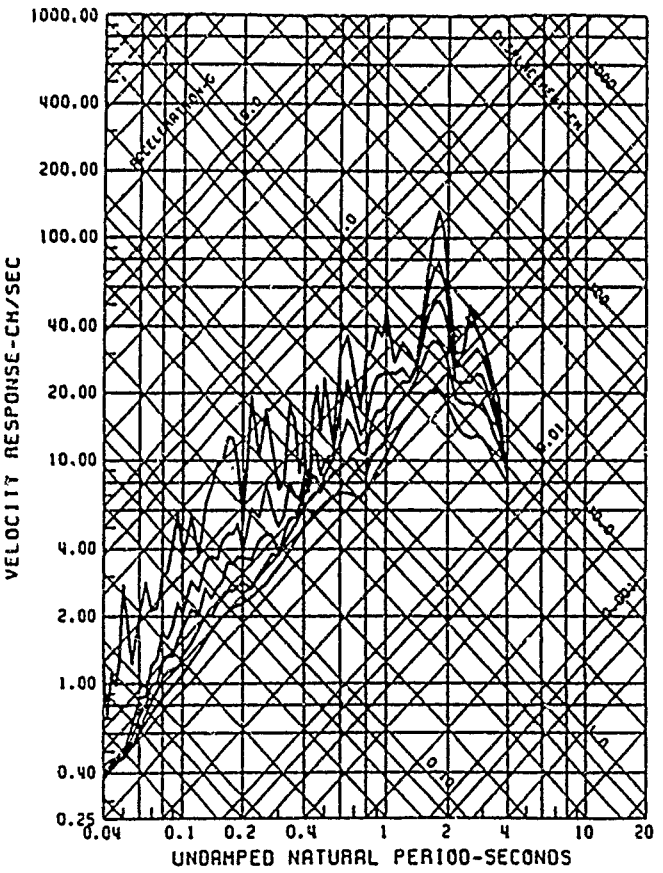
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

WHITTIER EARTHQUAKE
OCTOBER 1, 1987 07:42 PDT

CAL 279

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT AT 200. SPS
ANDERSON DAM - DOWNSTREAM
250 DEGREES
EARTHQUAKE OF OCTOBER 18, 1989 - 0004 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
PEAK VALUES: ACCEL= 238.84 CM/SEC/SEC, VELOCITY= 17.95 CM/SEC, DISPL= 3.76 CM





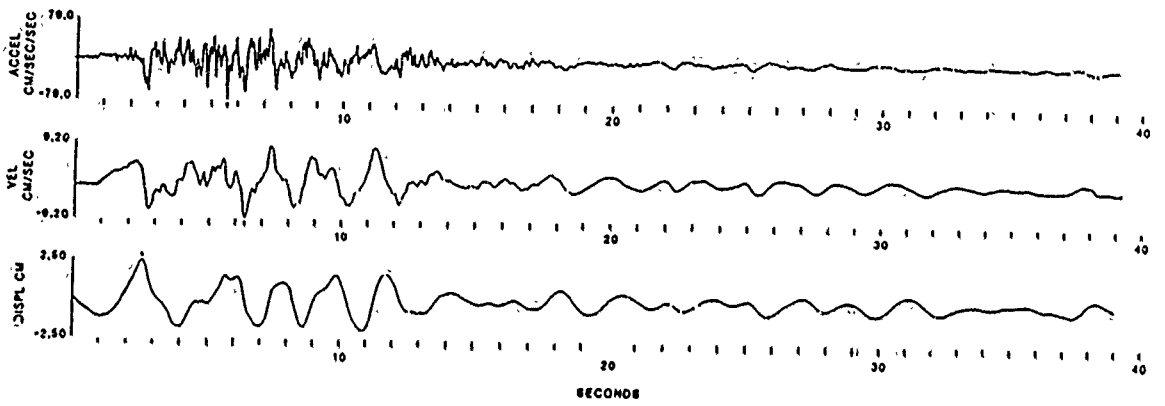
USGS OF 90-247

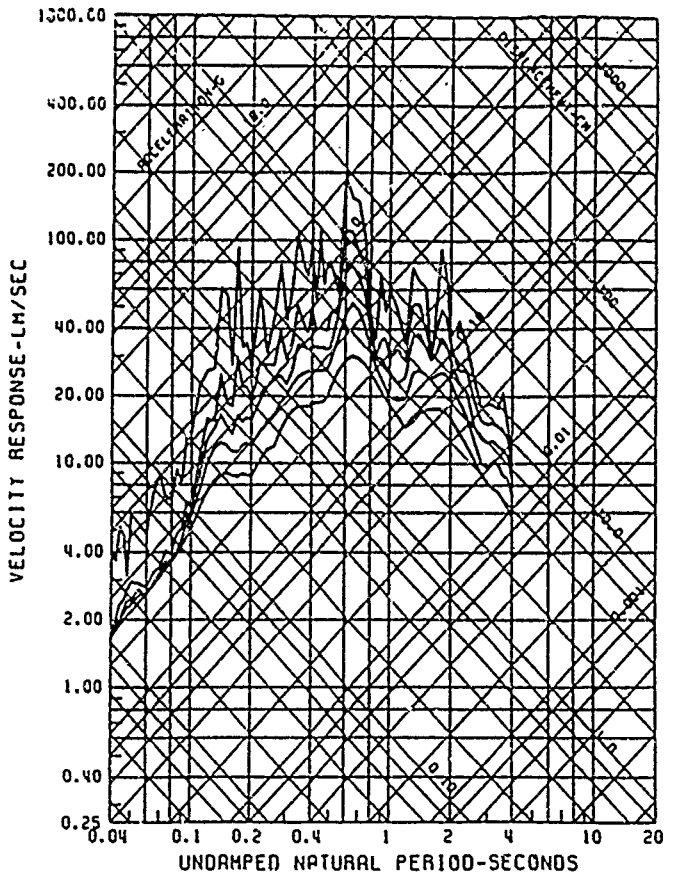
NATIONAL STRONG MOTION
DATA CENTER
0004GMT 250
BAND PASSED FROM
0.250 HZ. N=4, TO 25.00 HZ. N=5
CRITICAL DAMPING
0,2,5,10,20 PERCENT

ANDERSON DAM - LEFT ABUTMENT
10/18/89

CAL 323

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT AT 200. SPS
ANDERSON DAM - LEFT ABUTMENT
340 DEGREES
EARTHQUAKE OF OCTOBER 18, 1989 - 0004 GMT
HI-PASS BUTTERWORTH AT .25 HZ, ORDER 4, LO-PAS FFT AT 25-30 HZ
PEAK VALUES: ACCEL= -78.88 CM/SEC/SEC, VELOCITY= -9.14 CM/SEC, DISPL= 2.45 CM





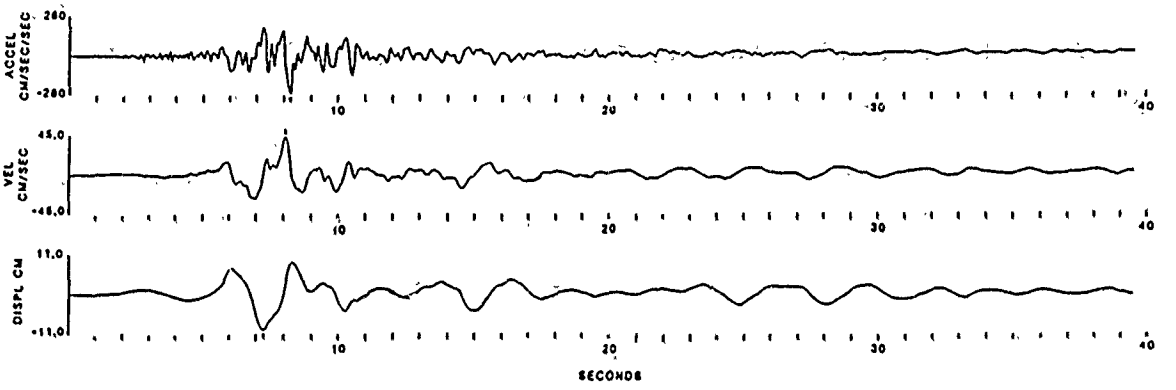
USGS OF 90-247

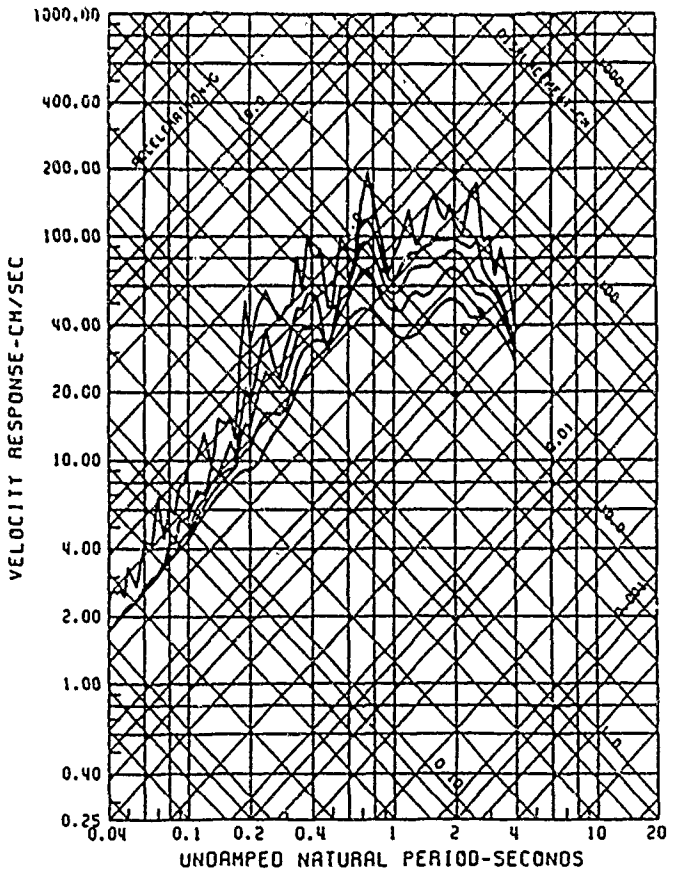
NATIONAL STRONG MOTION
DATA CENTER
0004GMT 340
FILTERS: BUTTERWORTH, ORDER 4
0.250 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

ANDERSON DAM - DOWNSTREAM
10/18/89

CAL 324

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT AT 200. SPS
HOLLISTER AIRPORT (DIFFERENTIAL ARRAY)
165 DEGREES
EARTHQUAKE OF OCTOBER 18, 1989 - 0004 GMT
BUTTERWORTH AT 0.25 HZ, ORDER 4
PEAK VALUES: ACCEL= -276.98 CM/SEC/SEC, VELOCITY= 44.39 CM/SEC, DISPL= -10.23 CM





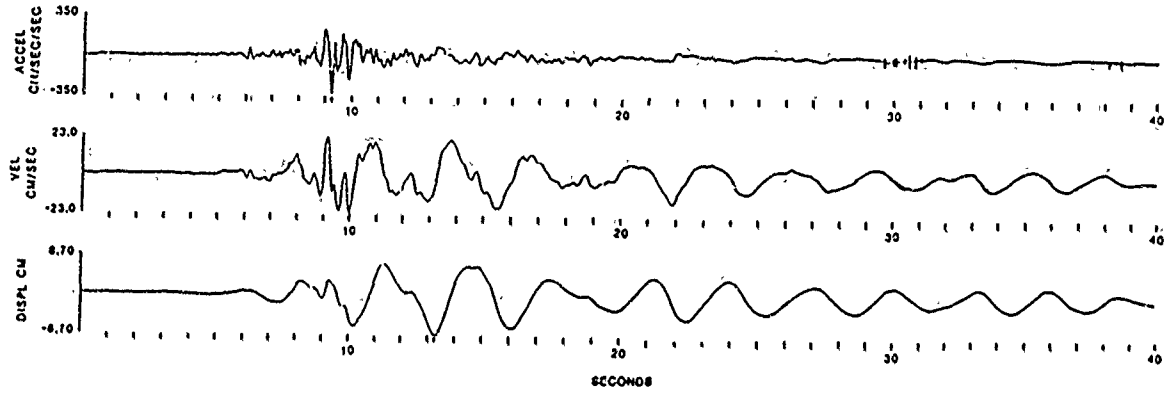
USGS OF 90-247

NATIONAL STRONG MOTION
DATA CENTER
0004GMT 165
FILTERS: BUTTERWORTH, ORDER 4
0.250 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0, 2, 5, 10, 20 PERCENT

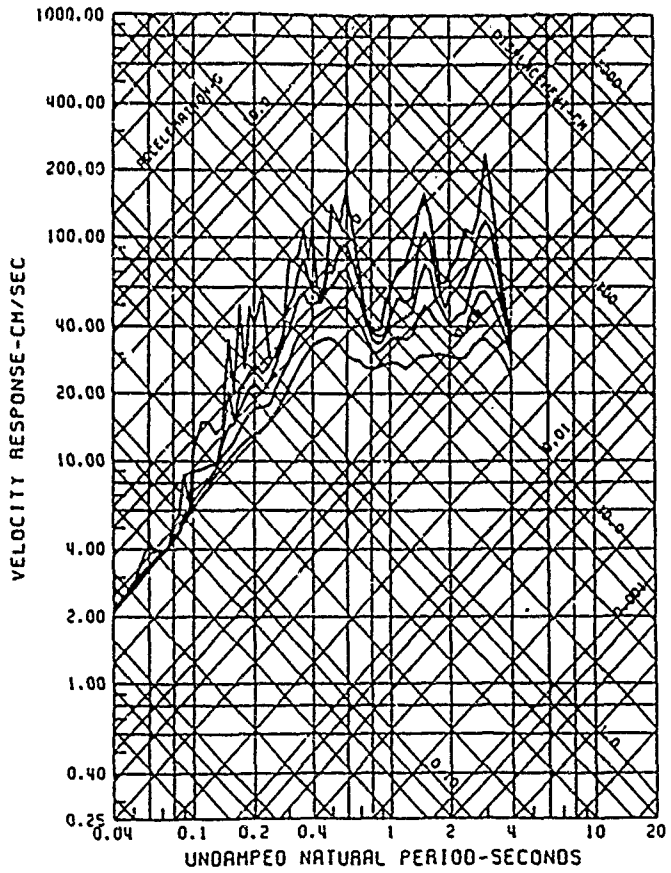
HOLLISTER AIRPORT
(DIFFERENTIAL ARRAY)
10/18/89

CAL 329

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT AT 200. SPS
PALO ALTO VA HOSPITAL – BLDG 1, BASEMENT
302 DEGREES
EARTHQUAKE OF OCTOBER 18, 1989 – 0004 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
PEAK VALUES: ACCEL= -341.53 CM/SEC/SEC, VELOCITY= -22.96 CM/SEC, DISPL= -8.64 CM



USGS OF 90-247



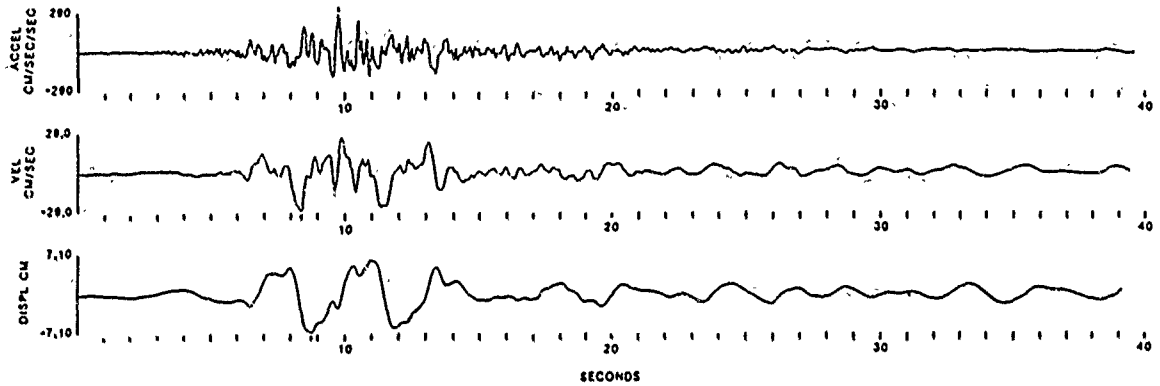
USGS OF 90-330

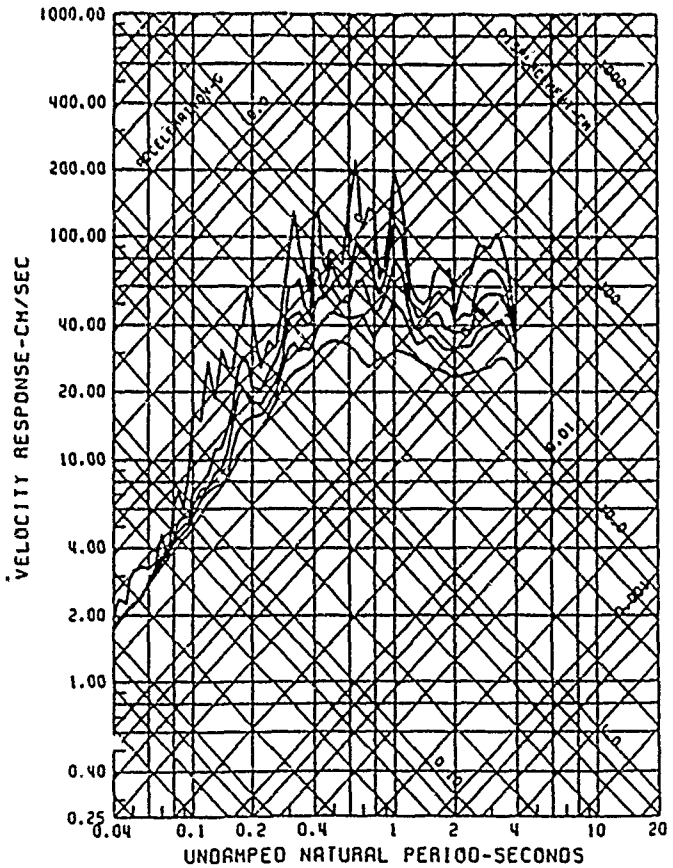
NATIONAL STRONG MOTION
DATA CENTER
0004GMT 302
FILTERS: BUTTERWORTH, ORDER 4
0.250 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

PALO ALTO VA HOSPITAL
BLDG 1, BASEMENT, 10/18/89

CAL 330

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT AT 200. SPS
STANFORD UNIVERSITY - SLAC TEST LAB
360 DEGREES
EARTHQUAKE OF OCTOBER 18, 1989 - 0004 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
PEAK VALUES: ACCEL= 282.08 CM/SEC/SEC, VELOCITY= -28.37 CM/SEC, DISPL= -7.06 CM





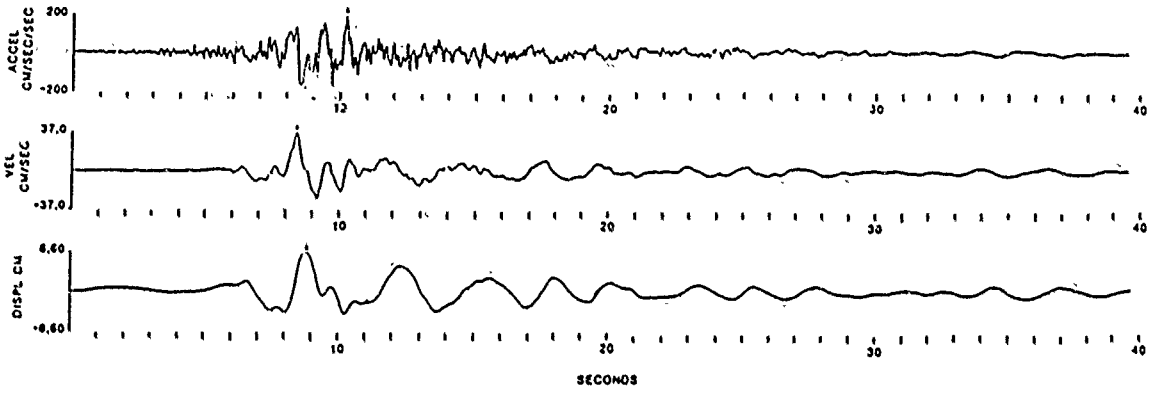
USGS OF 90-247

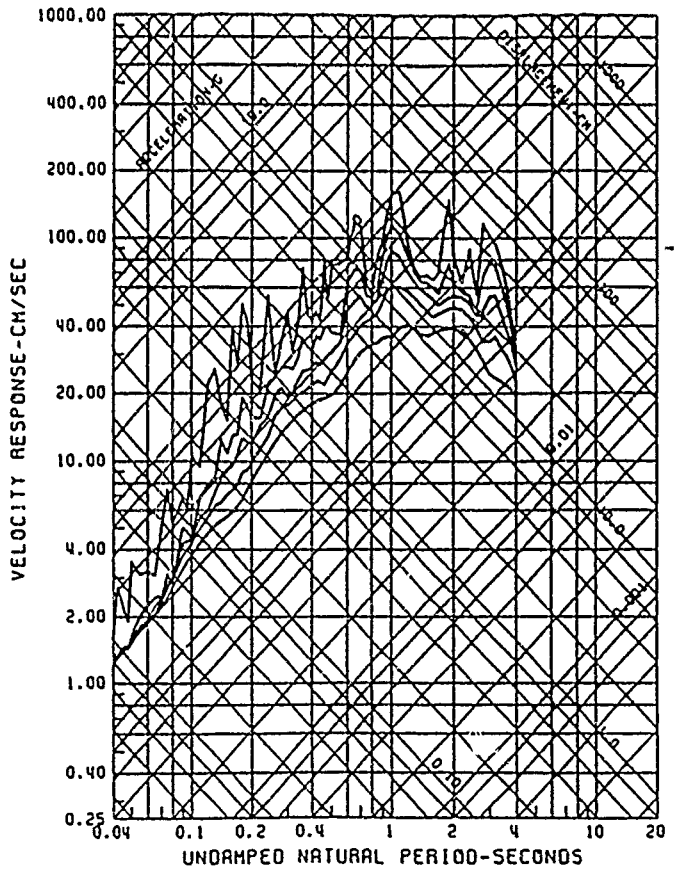
NATIONAL STRONG MOTION
DATA CENTER
0004GMT 360
FILTERS: BUTTERWORTH, ORDER 4
0.250 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

STANFORD UNIVERSITY
SLAC TEST LAB, 10/18/89

CAL 334

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT AT 200. SPS
STANFORD UNIVERSITY - SLAC TEST LAB
270 DEGREES
EARTHQUAKE OF OCTOBER 18, 1989 - 0004 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
PEAK VALUES: ACCEL= 197.88 CM/SEC/SEC, VELOCITY= 36.73 CM/SEC, DISPL= 8.51 CM





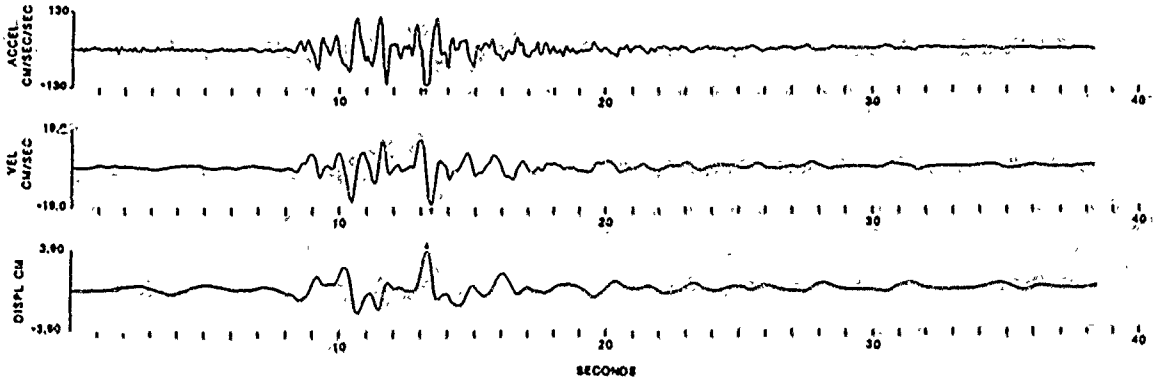
USGS OF 90-247

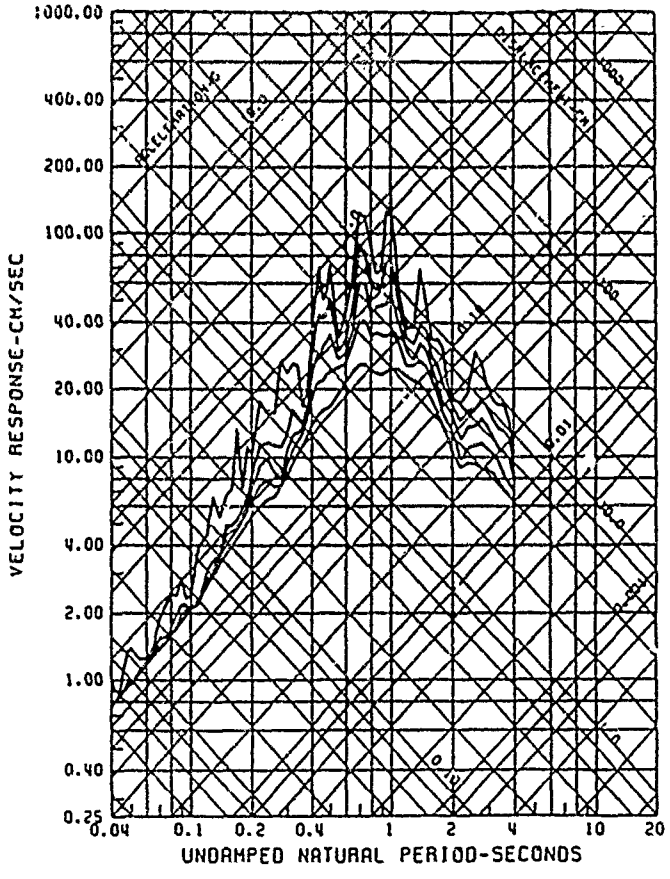
NATIONAL STRONG MOTION
DATA CENTER
0004GMT 270
FILTERS: BUTTERWORTH, ORDER 4
0.250 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

STANFORD UNIVERSITY
SLAC TEST LAB, 10/18/89

CAL 335

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT AT 200. SPS
SAN FRANCISCO – GOLDEN GATE BRIDGE, ABUTMENT BLDG
360 DEGREES
EARTHQUAKE OF OCTOBER 18, 1989 – 0004 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
PEAK VALUES: ACCEL= -124.17 CM/SEC/SEC, VELOCITY= -18.02 CM/SEC, DISPL= 3.86 CM



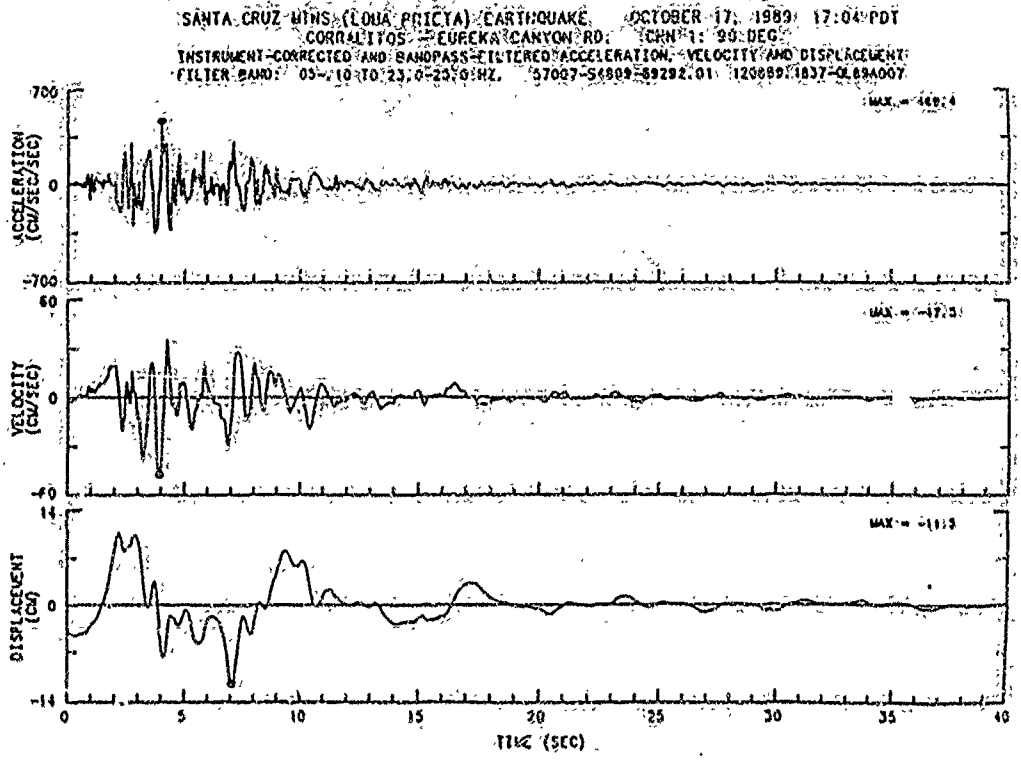


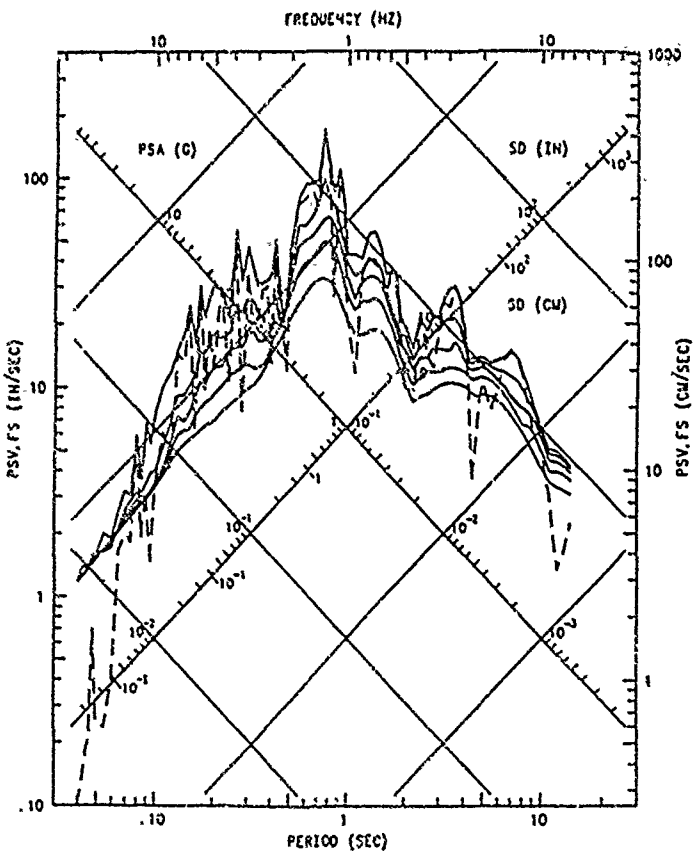
USGS OF 90-247

NATIONAL STRONG MOTION
DATA CENTER
0004GMT 360
FILTERS: BUTTERWORTH, ORDER 4
0.250 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SAN FRANCISCO
GOLDEN GATE BRIDGE
ABUTMENT BLD, 10/18/89

CAL 348



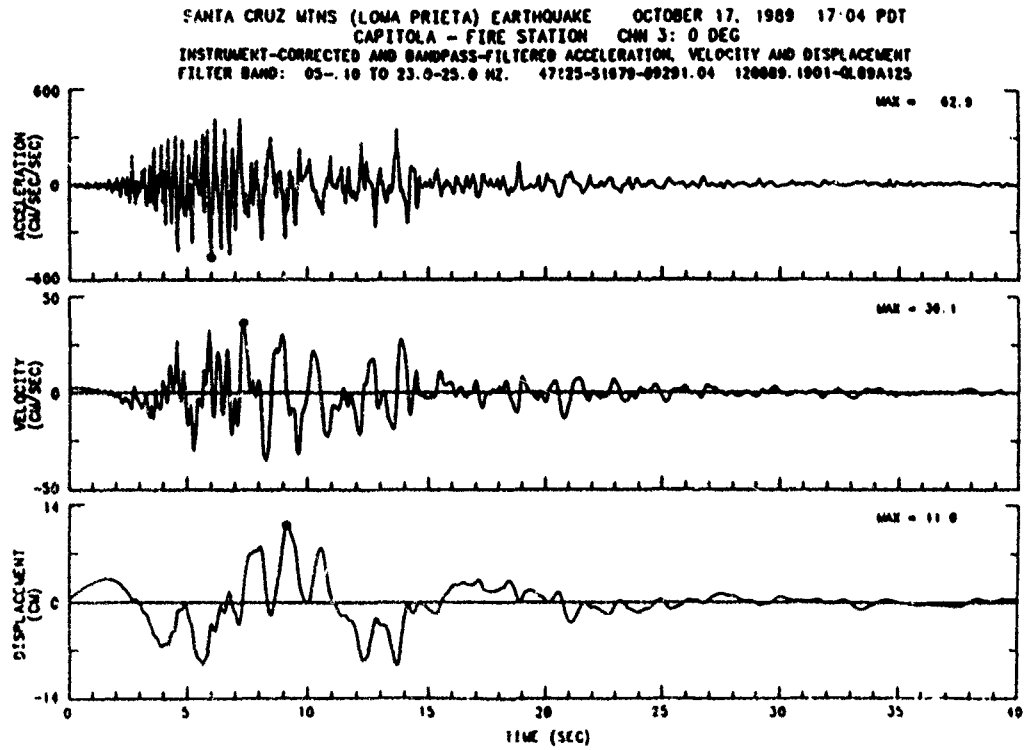


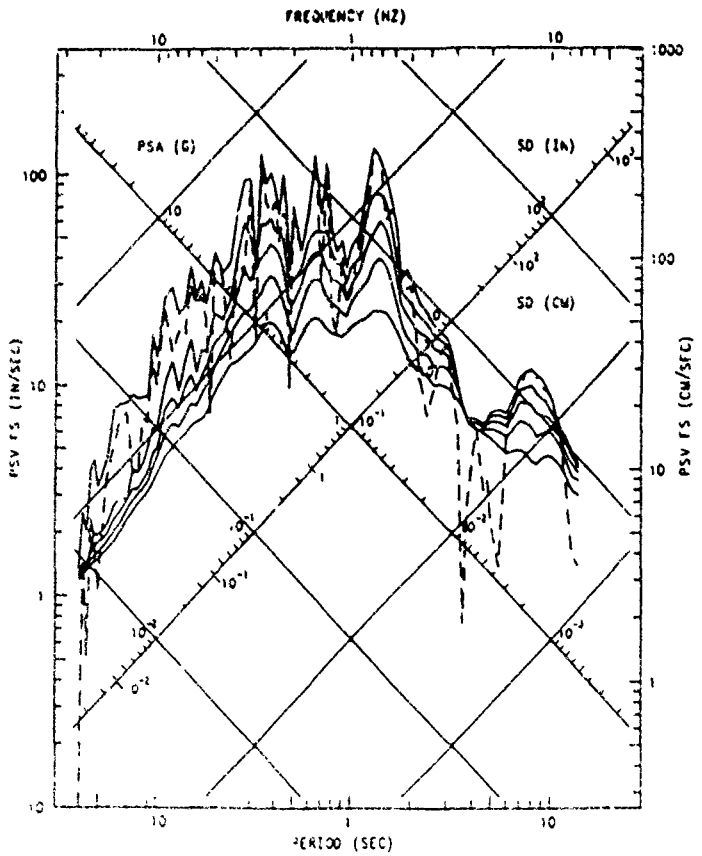
CDMG PLOTS 12/13/89

CORRALITOS - EUREKA CANYON RD.
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.10 TO 23.0-25.0 HZ.
57007-S4809-89292.01
120889.1959-QL89A007
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17 04 PDT

CAL 351



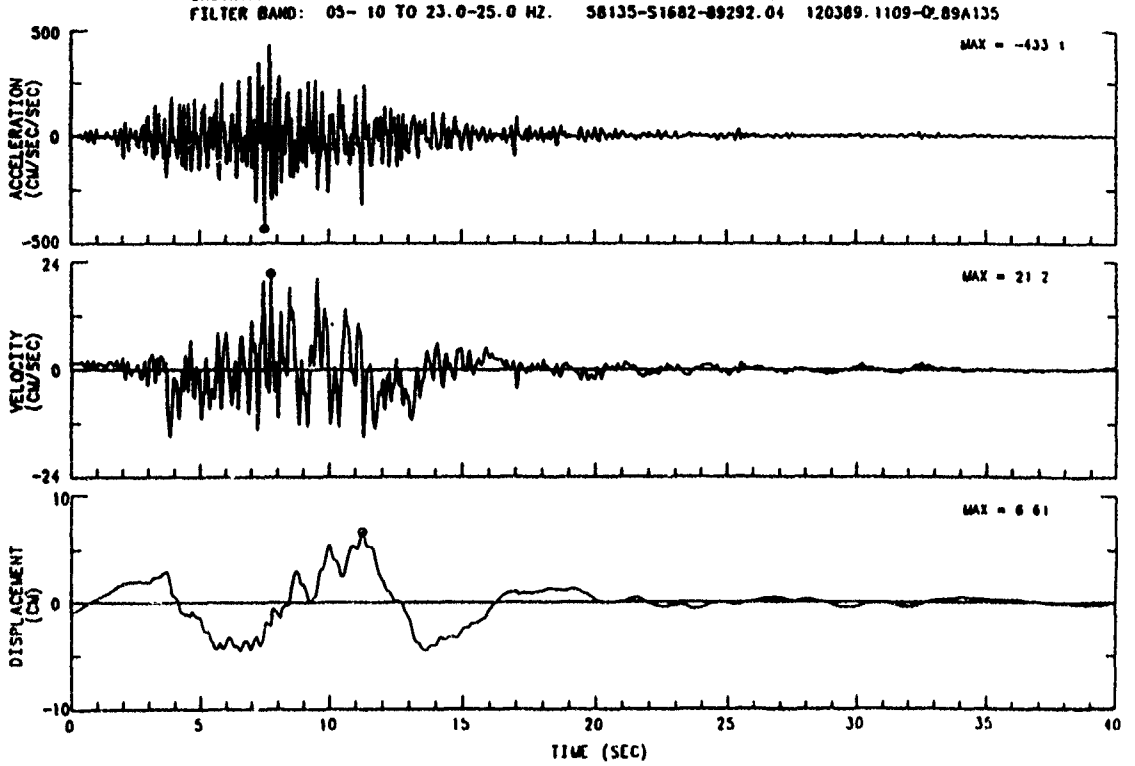


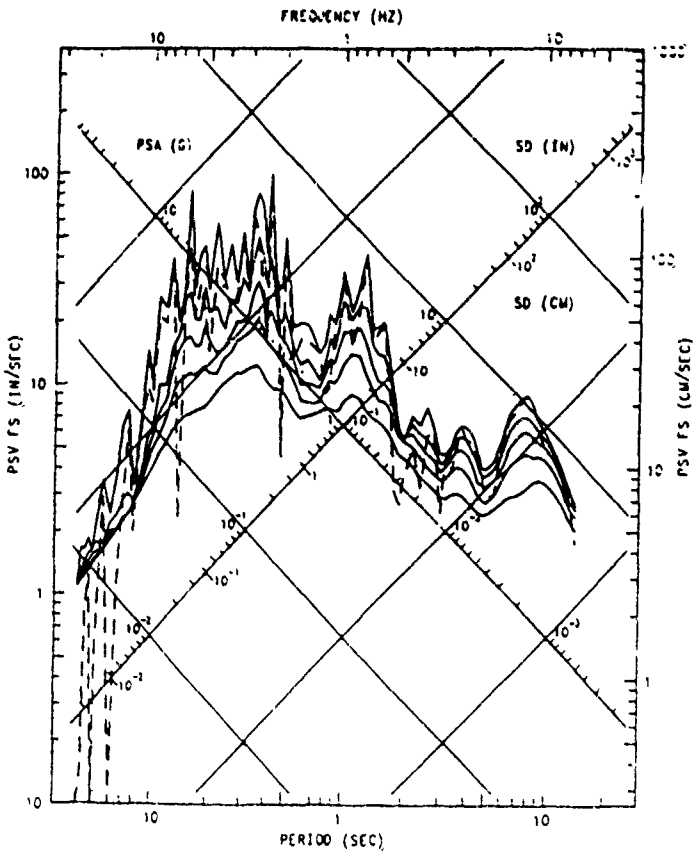
CDMG PLOTS 12/13/89

CAPITOLA - FIRE STATION
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT 05- 10 TO 23 0-25 0 HZ
47125-S1679-89291 04
120889.1925-QL89A125
—— RESPONSE SPECTRA PSV, PSA & SD
– – FOURIER AMPLITUDE SPECTRUM FS
DAMPING VALUES 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17 1989 17 04 PDT

CAL 353



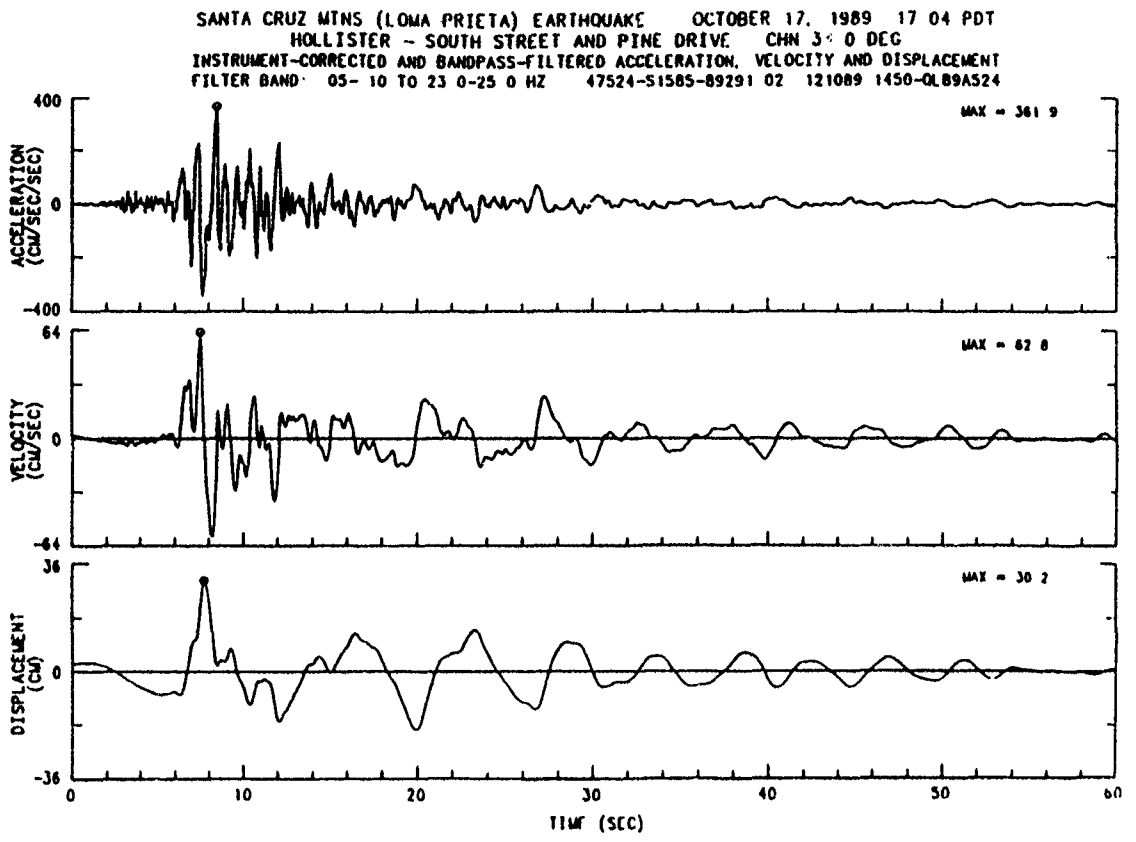


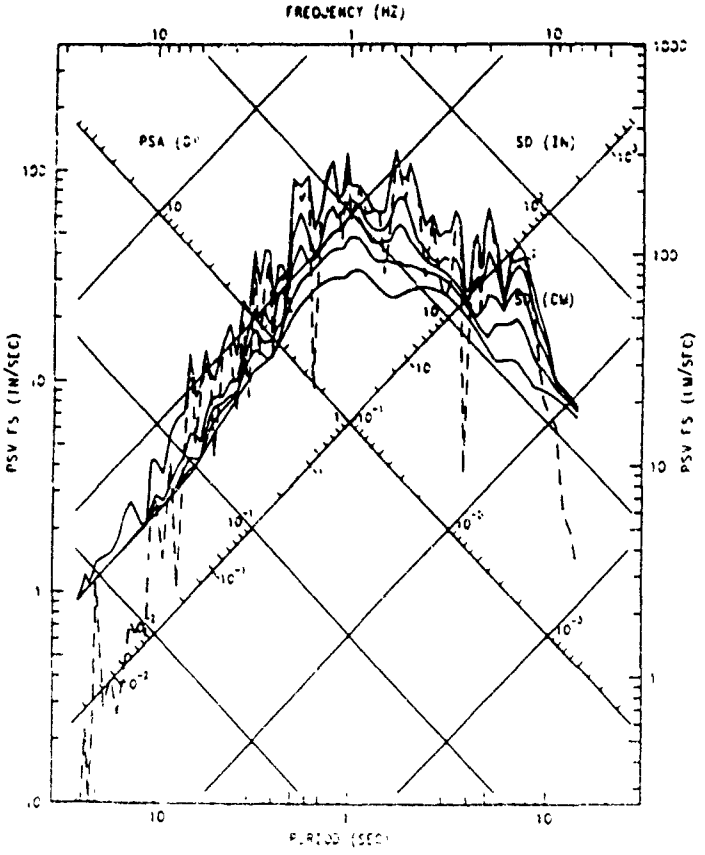
CDMG PLOTS 12/13/89

SANTA CRUZ - UCSC/LICK LAB
CHN 3 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT 05- 10 TO 23 0-25.0 HZ
58135-S1682-89292.04
121489.1933-QL89A135
—— RESPONSE SPECTRA PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17 04 PDT

CAL 354



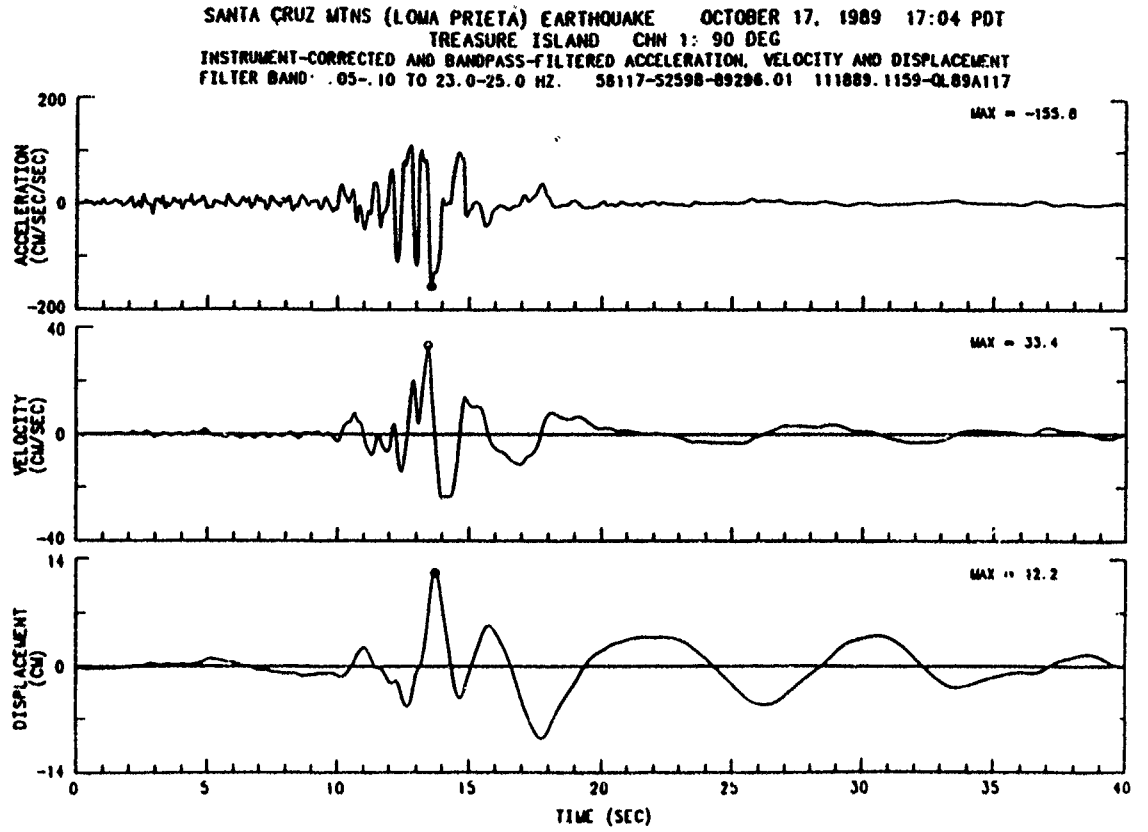


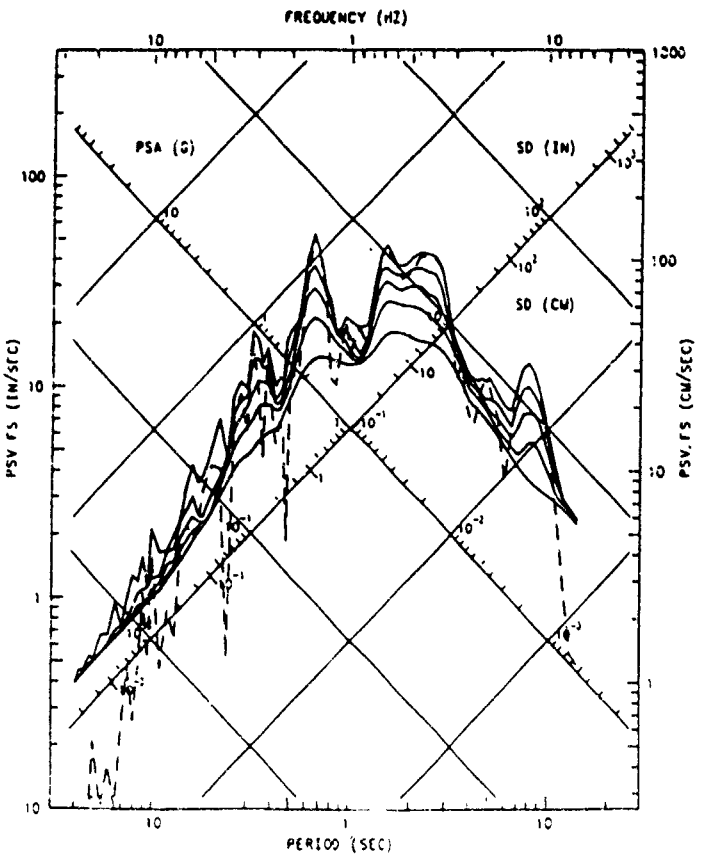
CDMG PLOTS 12/13/89

SOUTH STREET AND PINE DRIVE
HOLLISTER - CHN 3 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT 05- 10 TO 23 0-25 0 HZ
47524-S1585-89291.02
121389 1842-QL89A524
—— RESPONSE SPECTRA PSV, PSA & SD
– – FOURIER AMPLITUDE SPECTRUM FS
DAMPING VALUES 0, 2, 5 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17 04 PDT

CAL 356



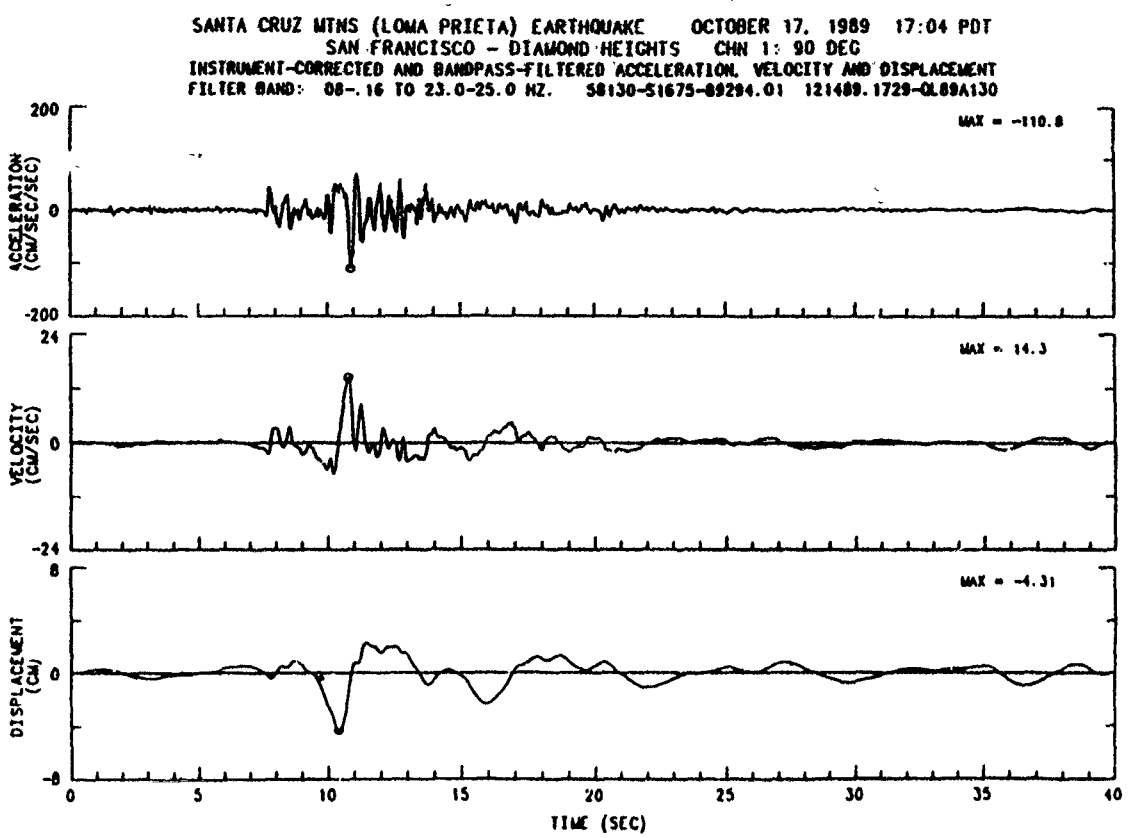


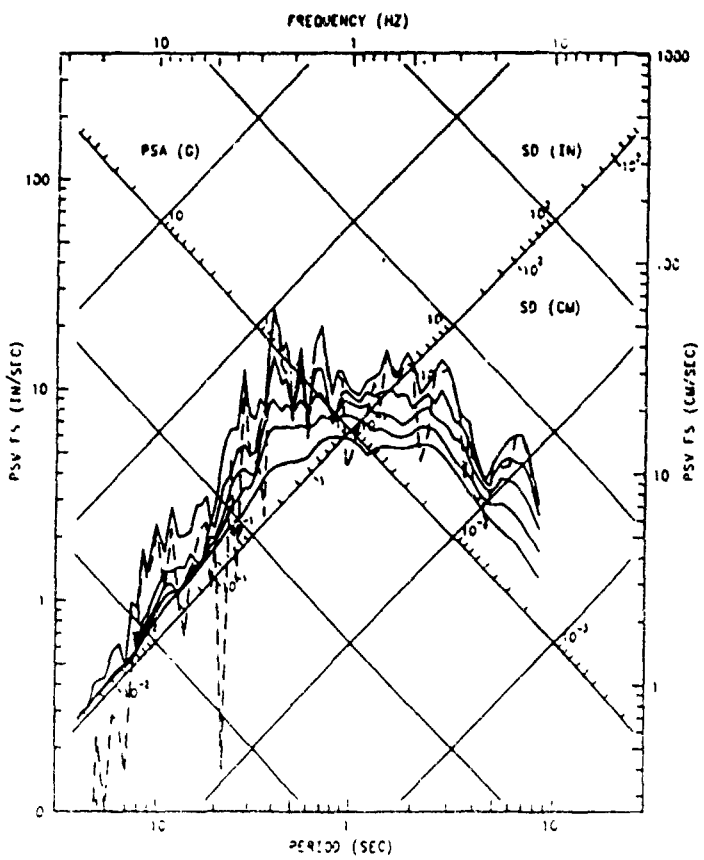
CDMG PLOTS 12/13/89

TREASURE ISLAND CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.10 TO 23.0-25.0 HZ
58117-S2598-89296.01
120889.1706-QL89A117
—— RESPONSE SPECTRA PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM FS
DAMPING VALUES 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 359



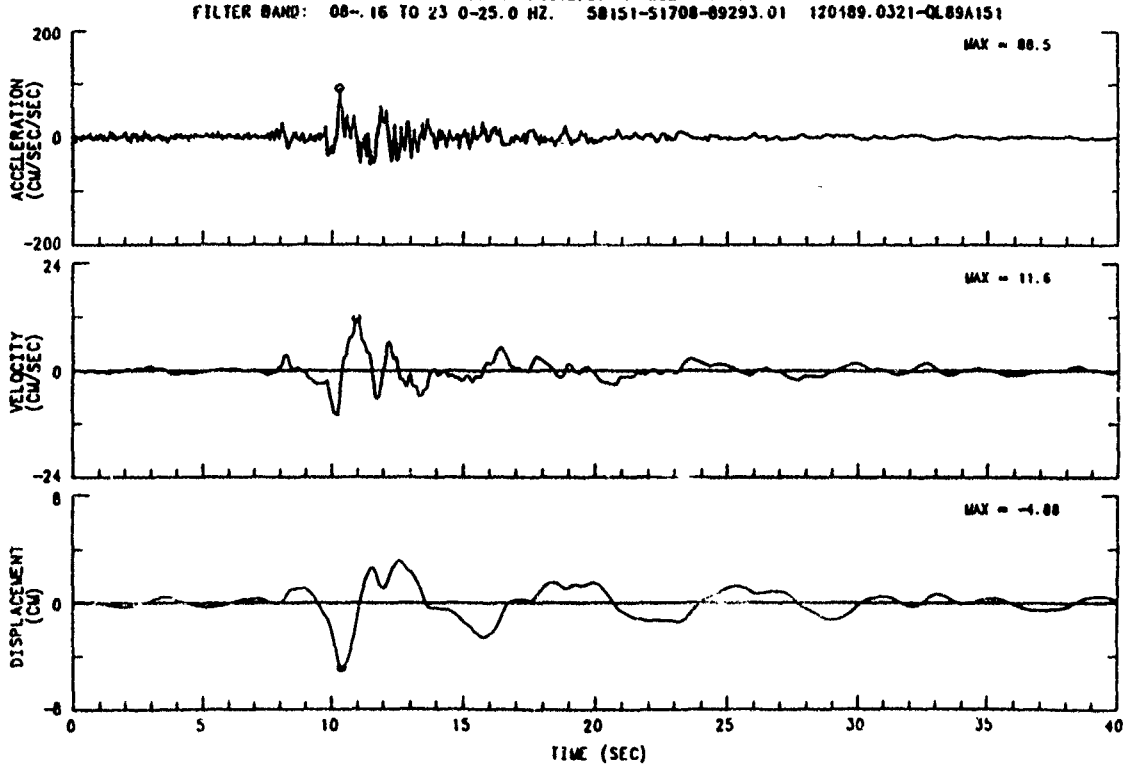


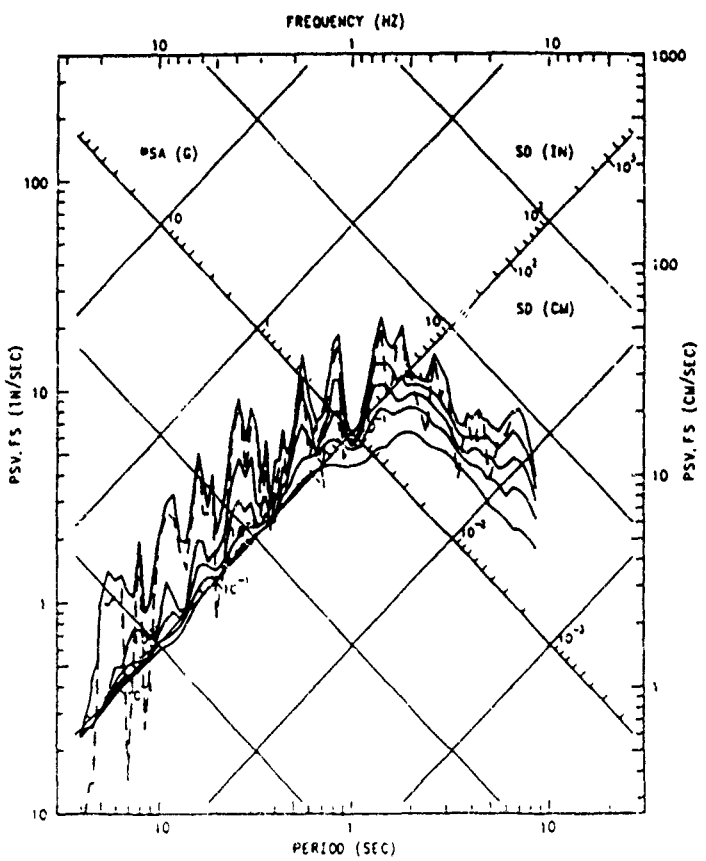
CDMG PLOTS 12/13/89

SAN FRANCISCO - DIAMOND HEIGHTS
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ
58130-S1675-89294.01
121489.1743-QL89A130
—— RESPONSE SPECTRA: PSV, PSA & SD
– – FOURIER AMPLITUDE SPECTRUM FS
DAMPING VALUES 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17 04 PDT

CAL 362



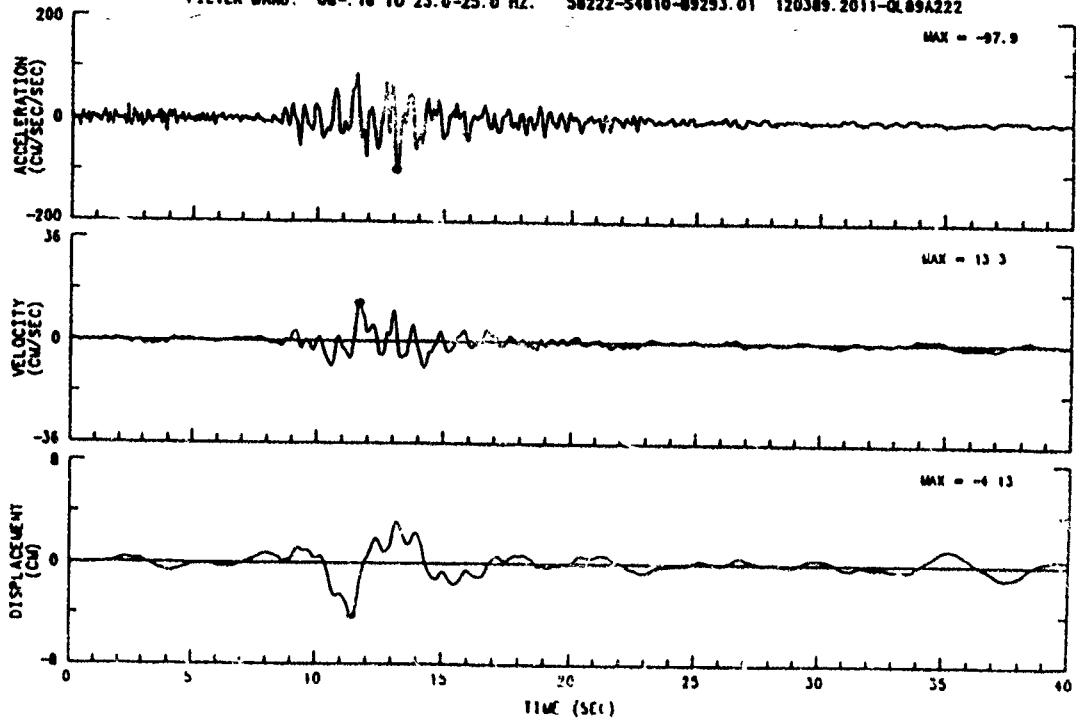


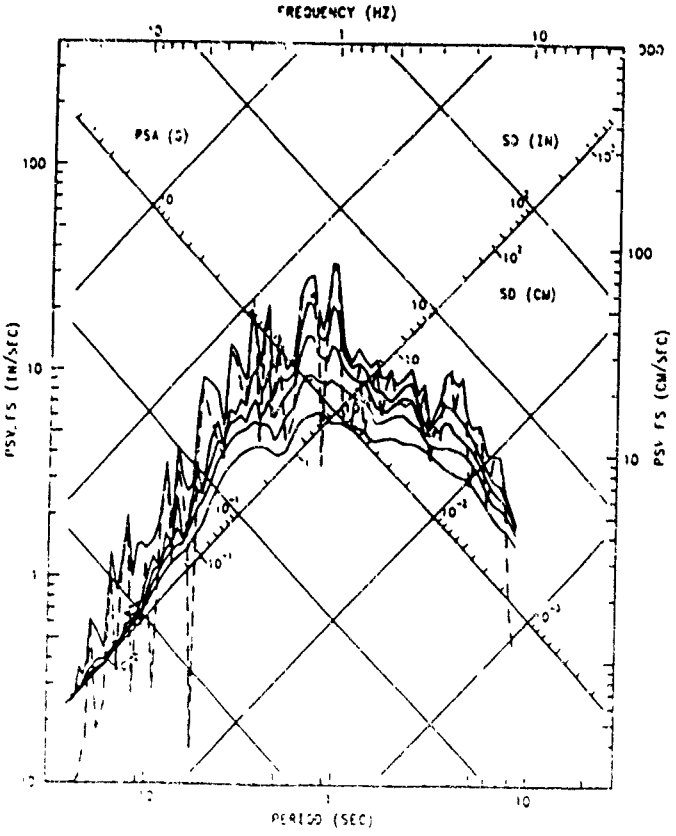
CDMG PLOTS 12/13/89

SAN FRANCISCO - RINCON HILL
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ
58151-51708-89293.01
121389.1704-QL89A151
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17 04 PDT

CAL 363



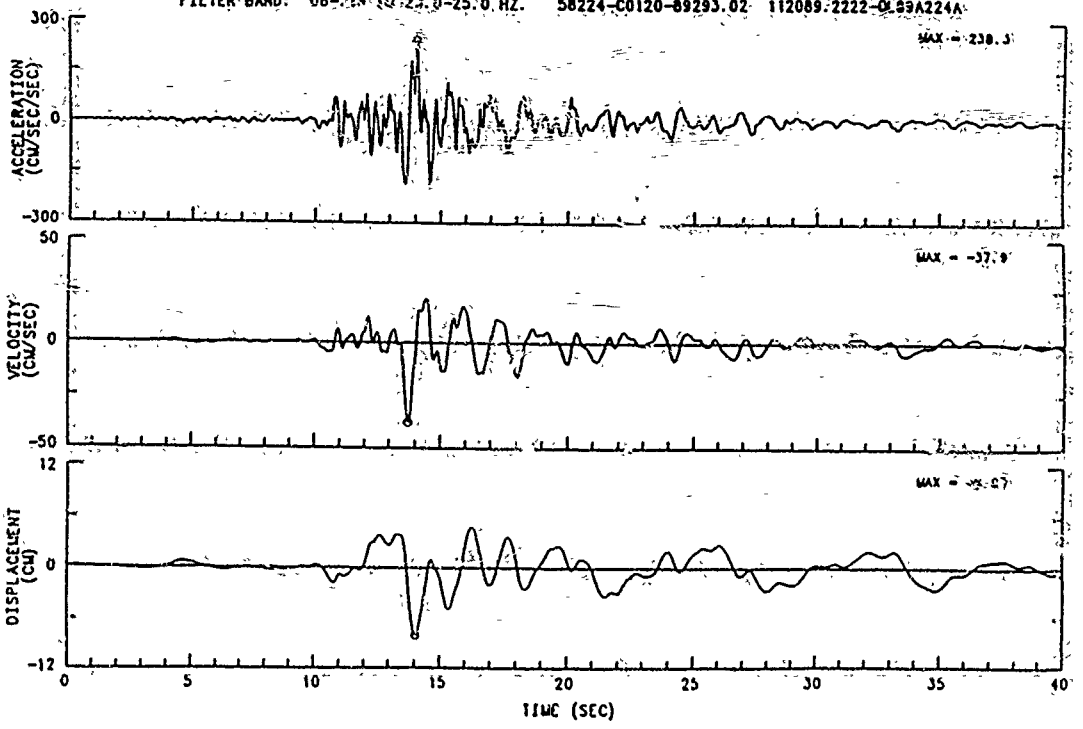


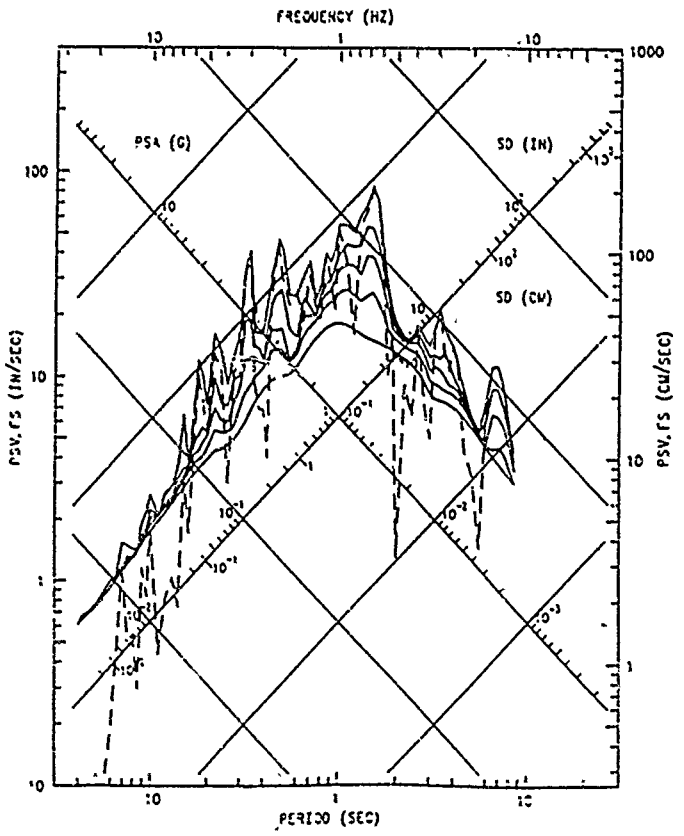
CDMG PLOTS 12/13/89

SAN FRANCISCO - PRESIDIO
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
58222-S4810-89293.01
121389 1742-QL89A222
—— RESPONSE SPECTRA: PSV, PSA & SD
– – – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17 04 PDT

CAL 365



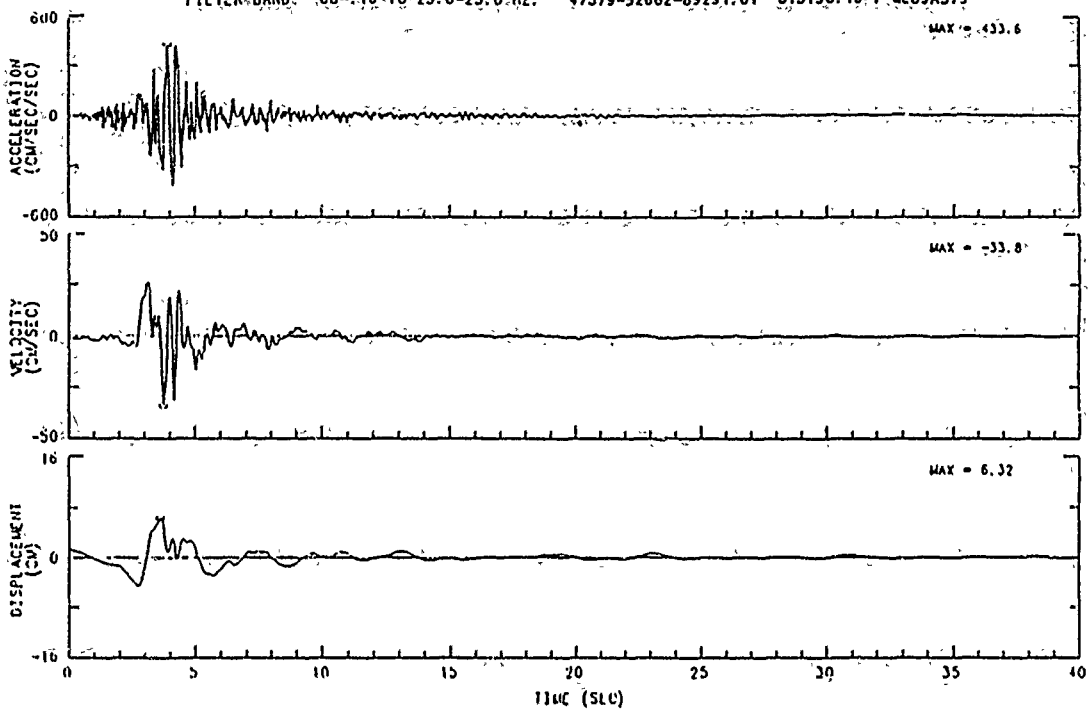


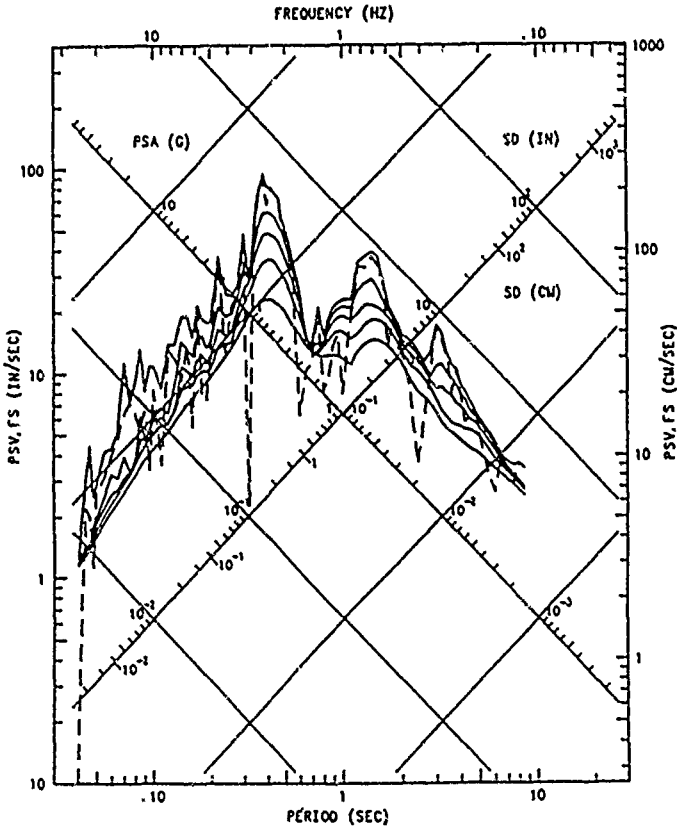
CDMG PLOTS 12/13/89

OAKLAND - 2-STORY OFFICE BLDG.
(GROUND FLOOR, AT NE CORNER)
CHN 2: 290 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
58224-C0120-89293.02
121489.1157-QL89A224A
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 369



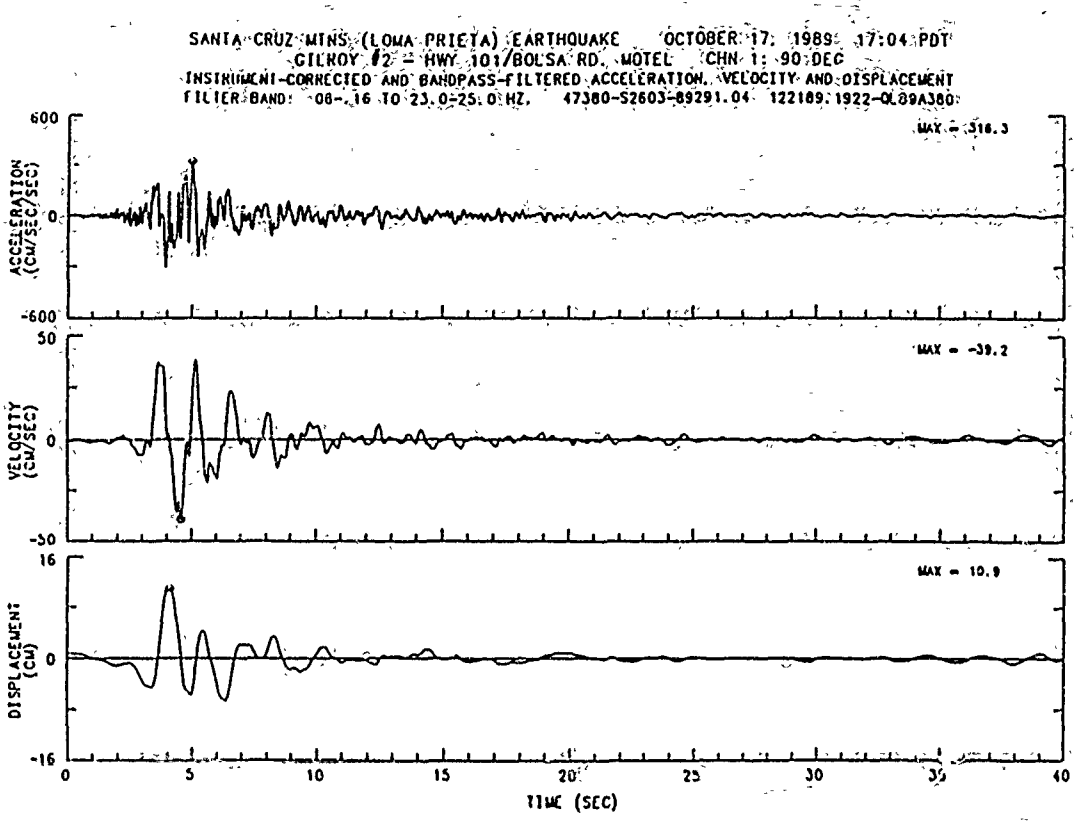


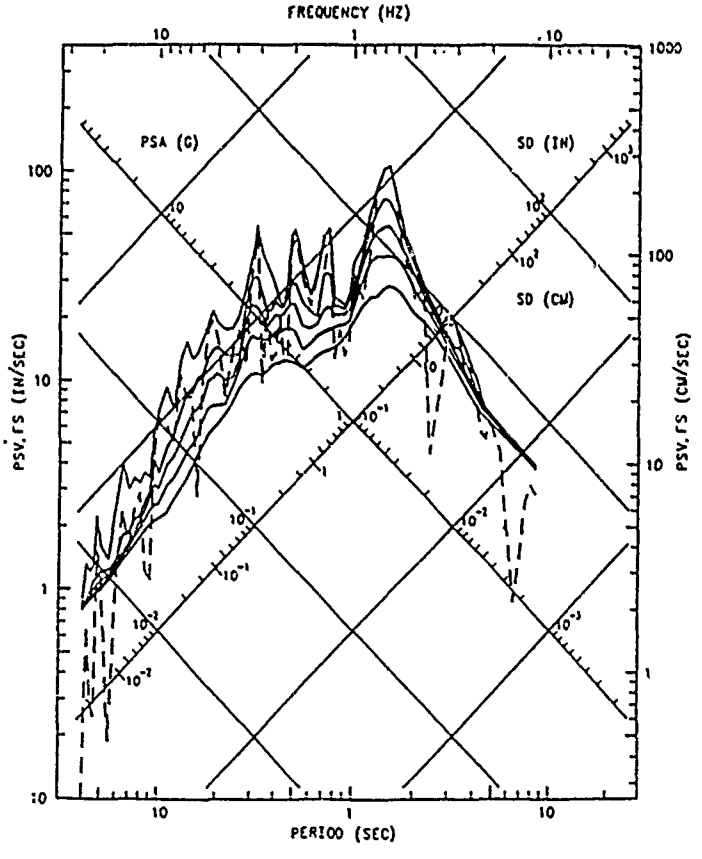
CDMG OSMS 90-01

GILROY #1 - GAVILAN COLLEGE
WATER TANK CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
47379-S2602-89291.01
013190.1724-QL89A379
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 372



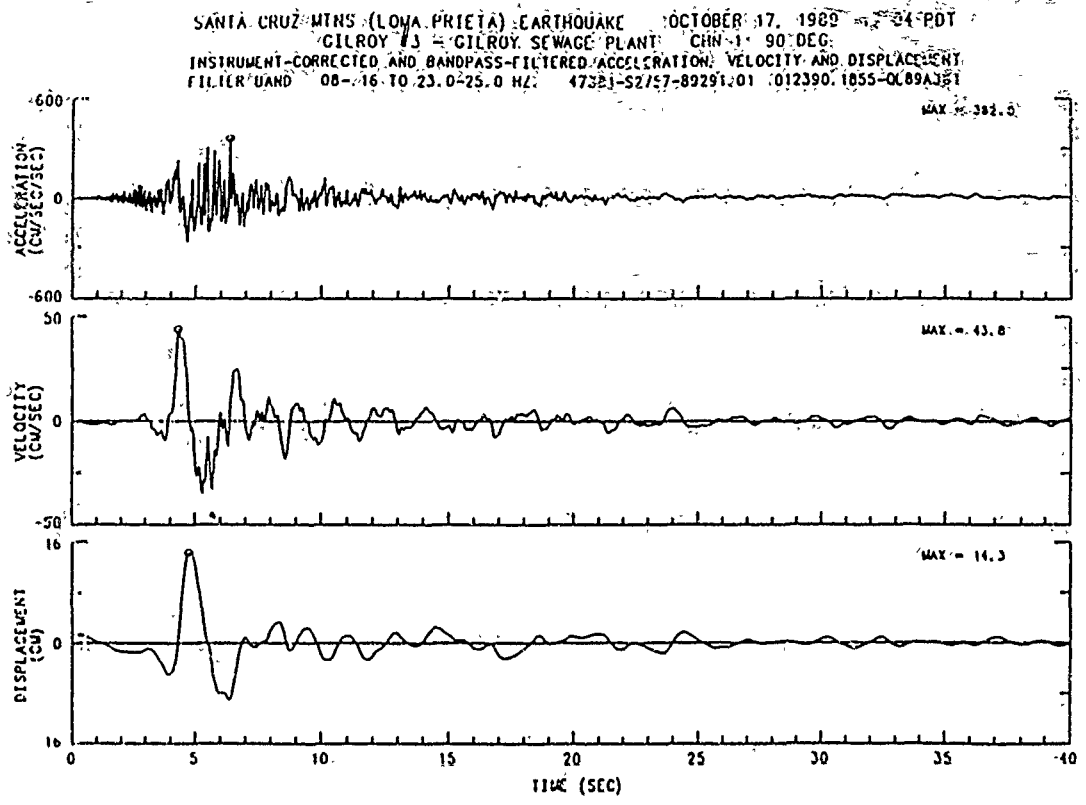


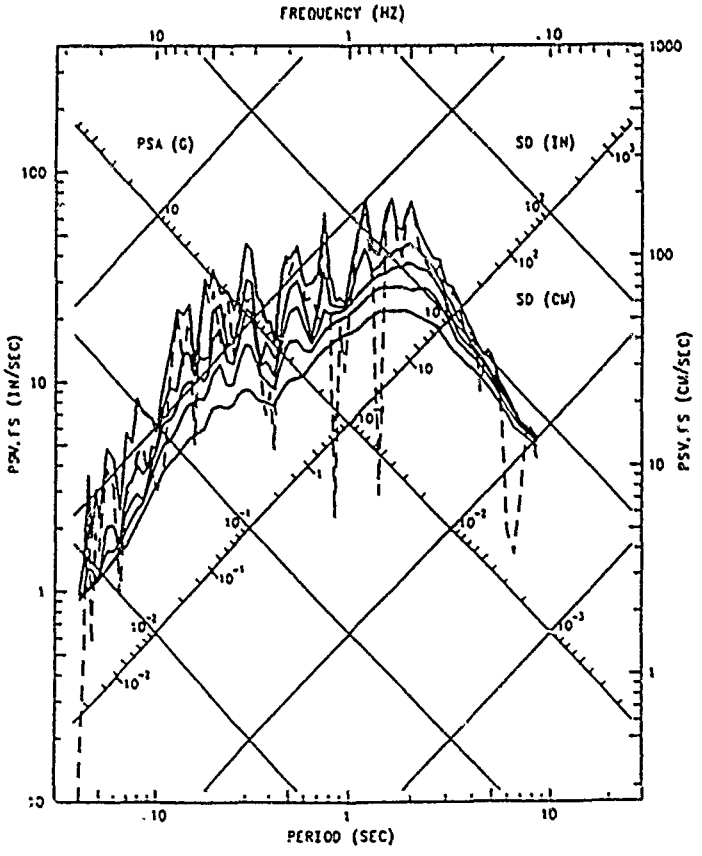
CDMG OSMS 90-01

GILROY #2 – HWY 101
BOLSA RD. MOTEL CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
47380-S2603-89291.04
020190.1628-QL89A380
—— RESPONSE SPECTRA: PSV, PSA & SI
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PD

CAL 374



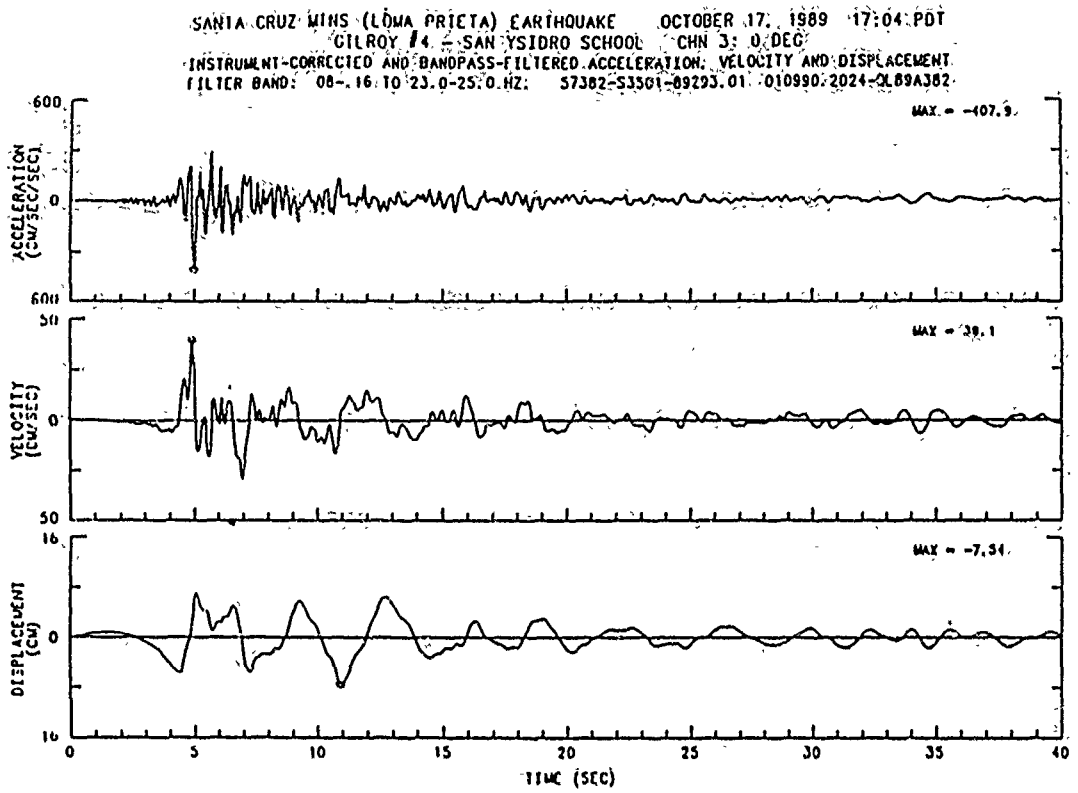


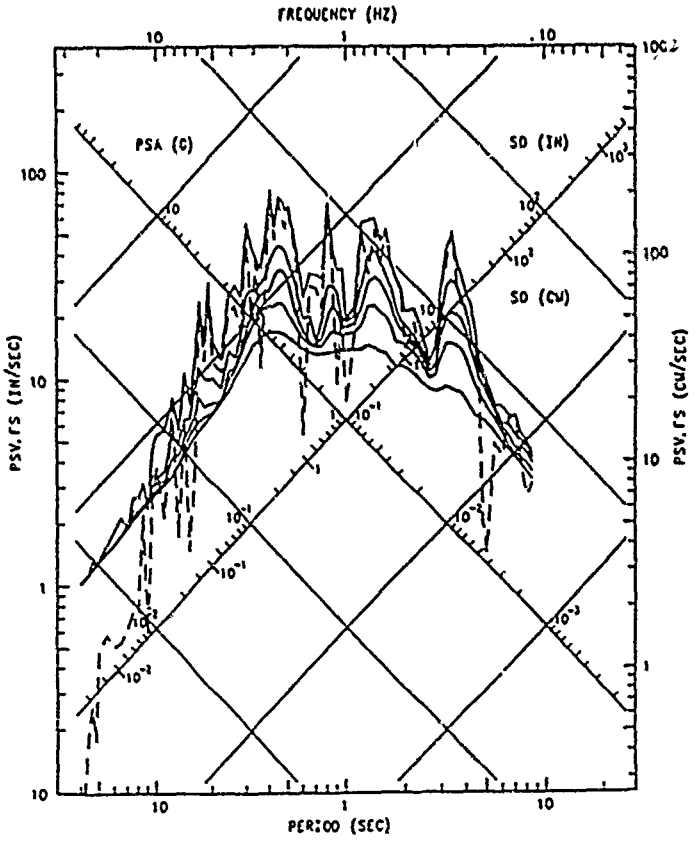
CDMG OSMS 90-01

GILROY #3 - GILROY SEWAGE PLANT
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
47381-S2757-89291.01
020190.1618-QL89A381
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 376



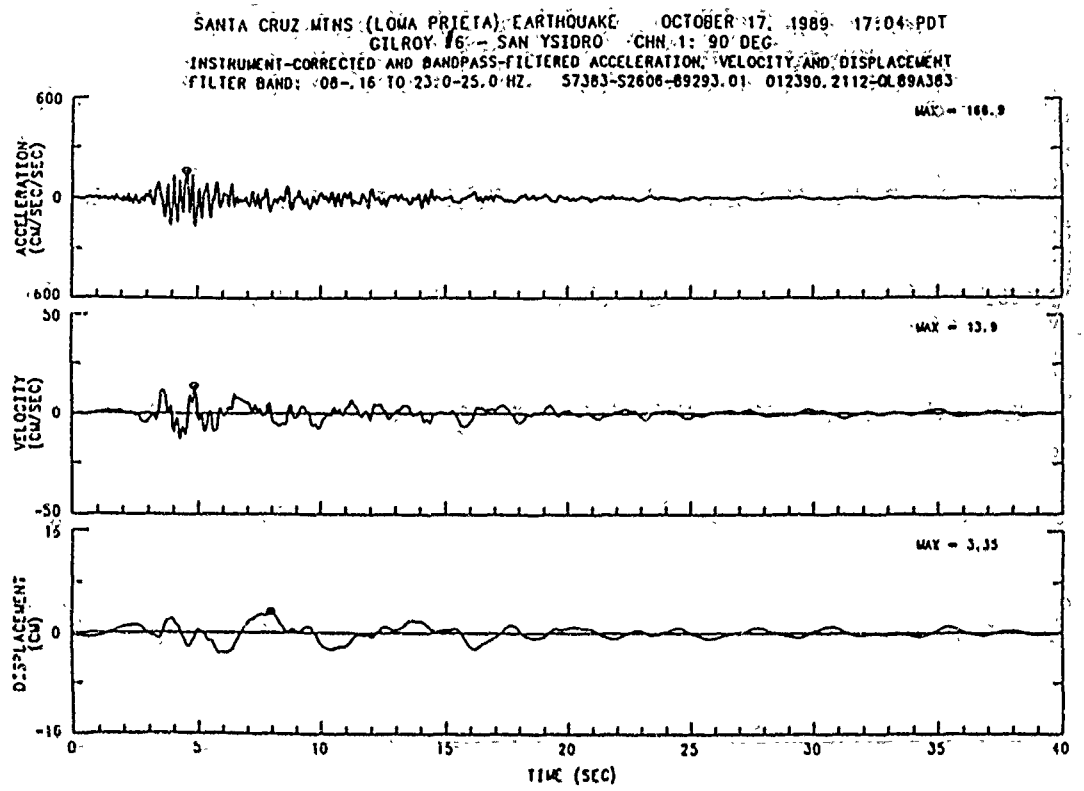


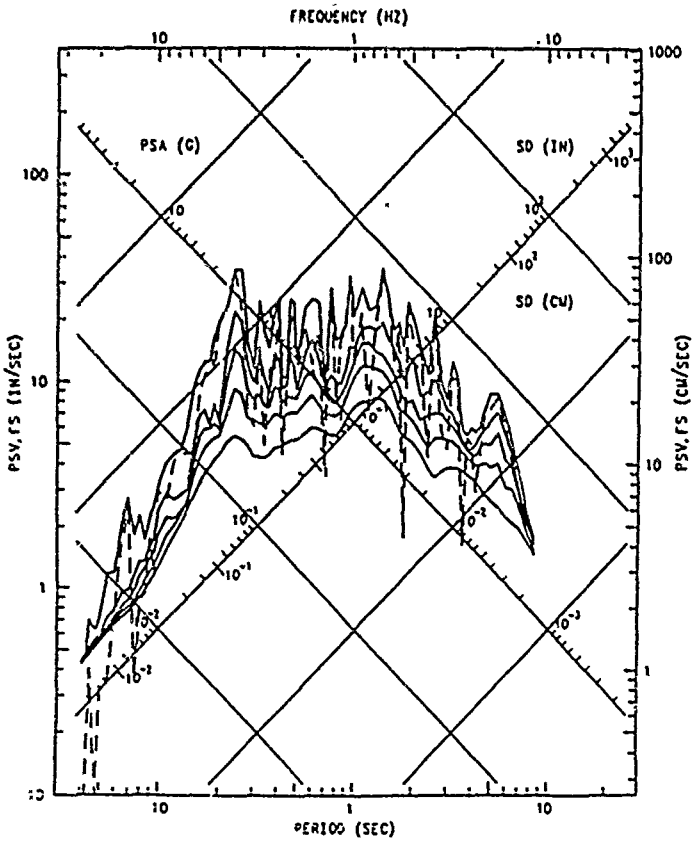
CDMG OSMS 90-01

GILROY #4 - SAN YSIDRO SCHOOL
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
57382-S3501-89293.01
020190.1606-QL89A382
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 377



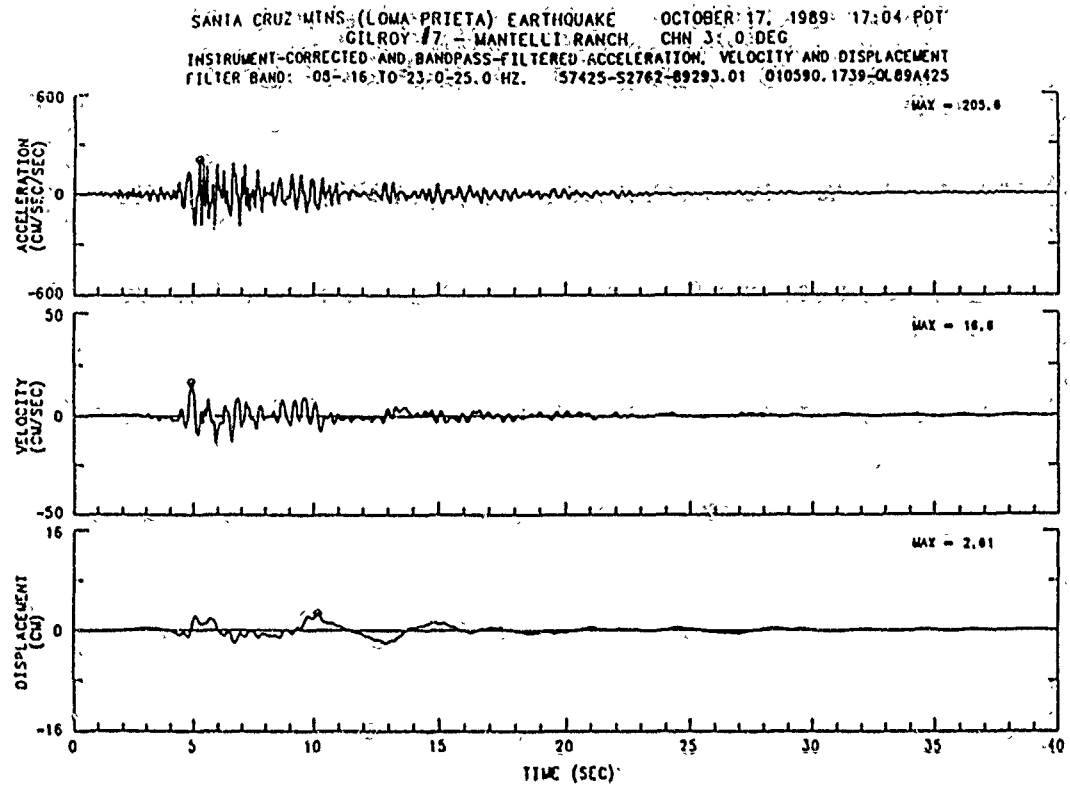


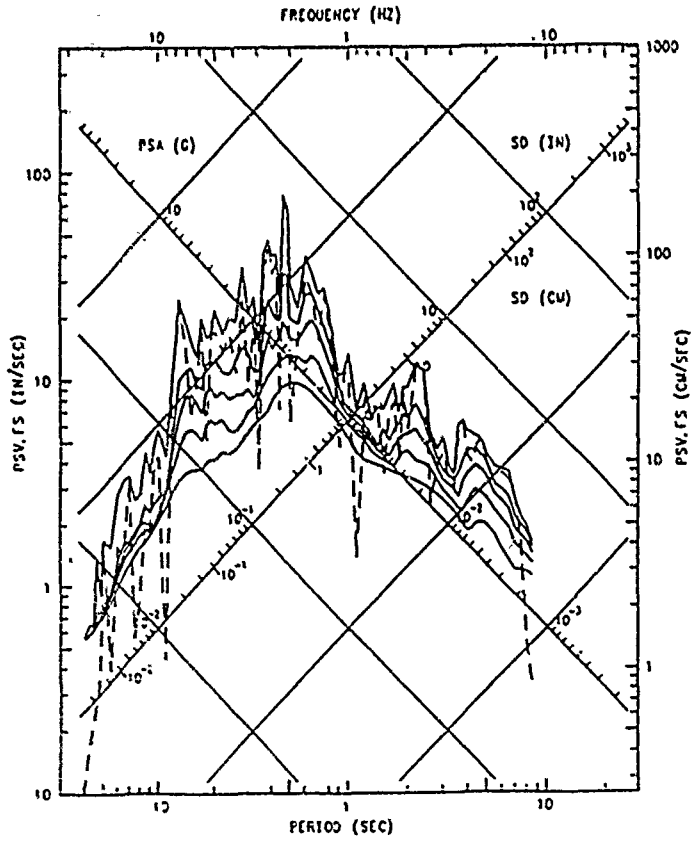
CDMG OSMS 90-01

GILROY #6 - SAN YSIDRO
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
57383-S2606-89293.01
020190.1702-QL89A383
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 580



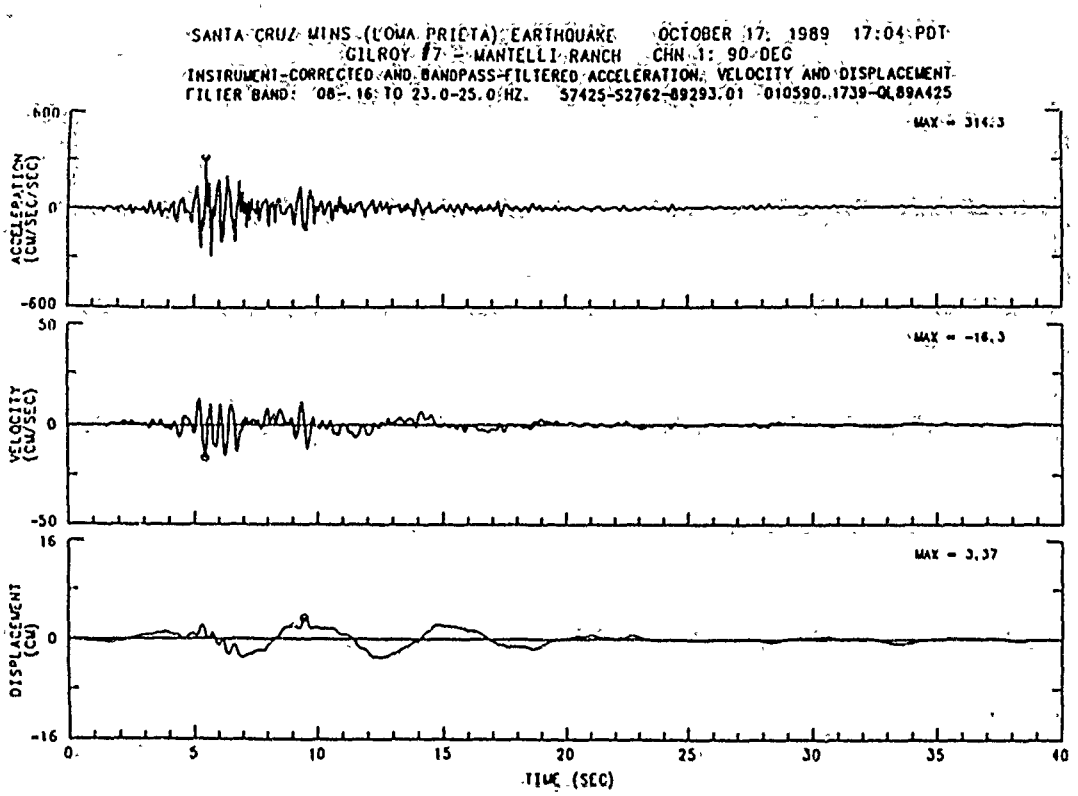


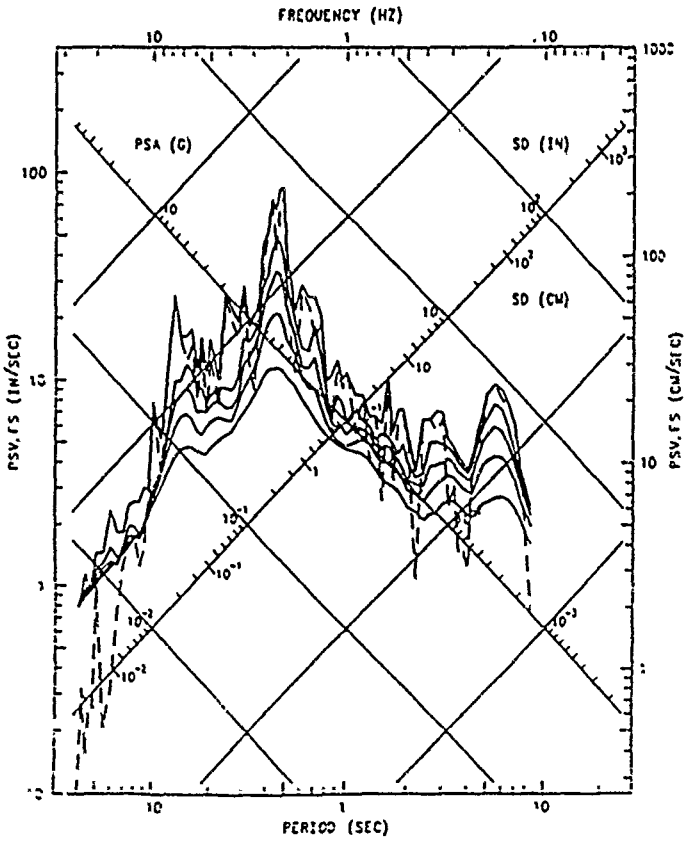
CDMG OSMS 90-01

GILROY #7 - MANTELLI RANCH
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
57425-S2762-89293.01
020190.1540-0L89A425
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 381



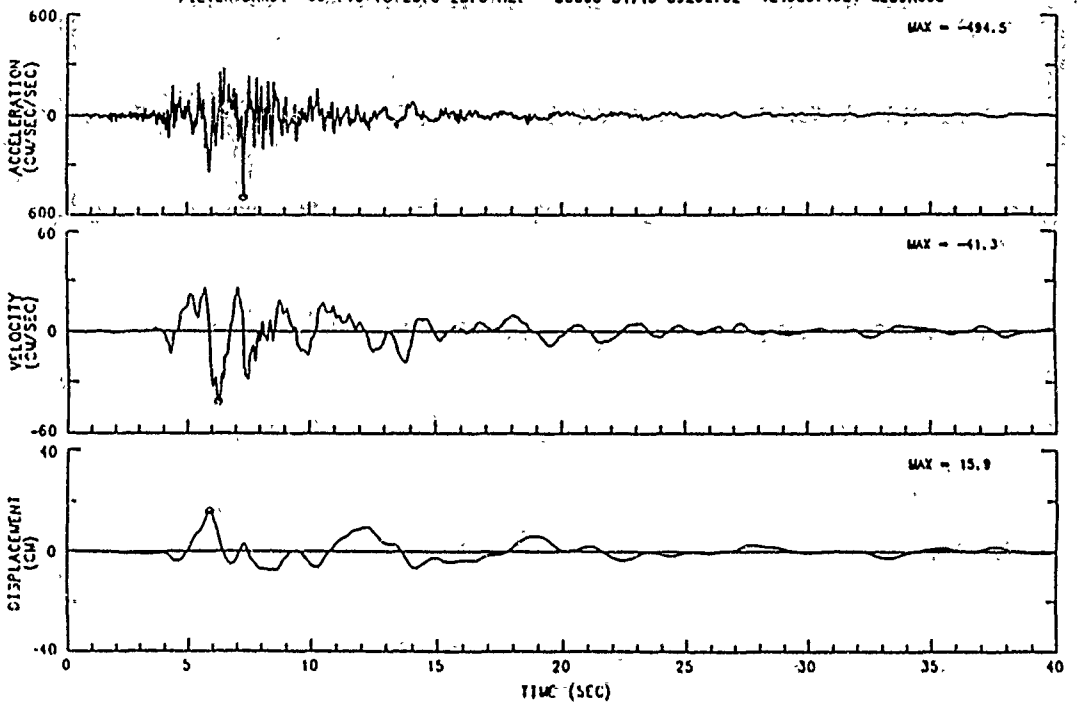


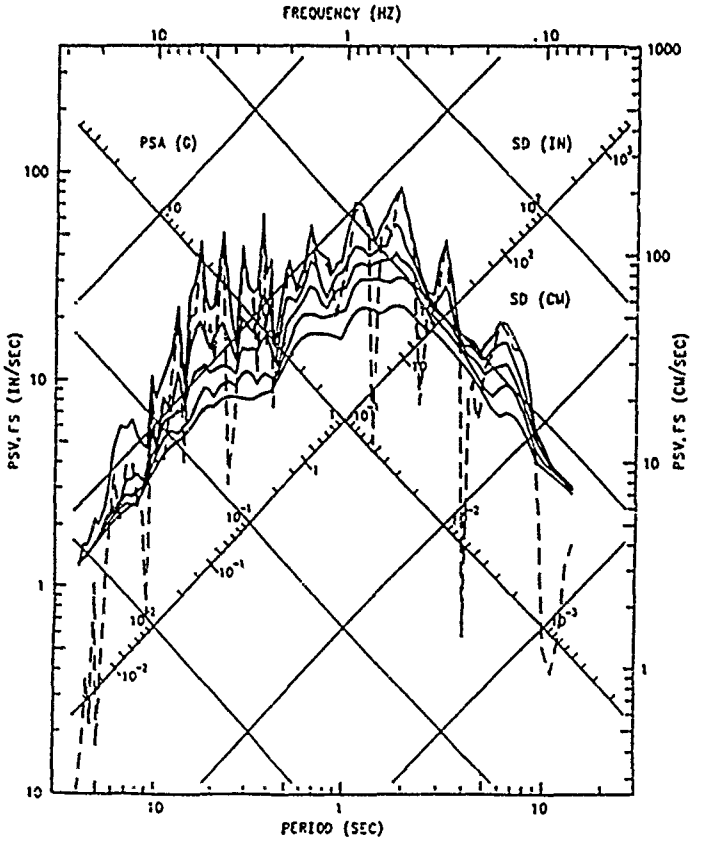
CDMG OSMS 90-01

GILROY #7 - MANTELLI RANCH
CHN 1: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
57425-S2762-89293.01
020190.1540-QL89A425
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 382





CDMG OSMS 90-01

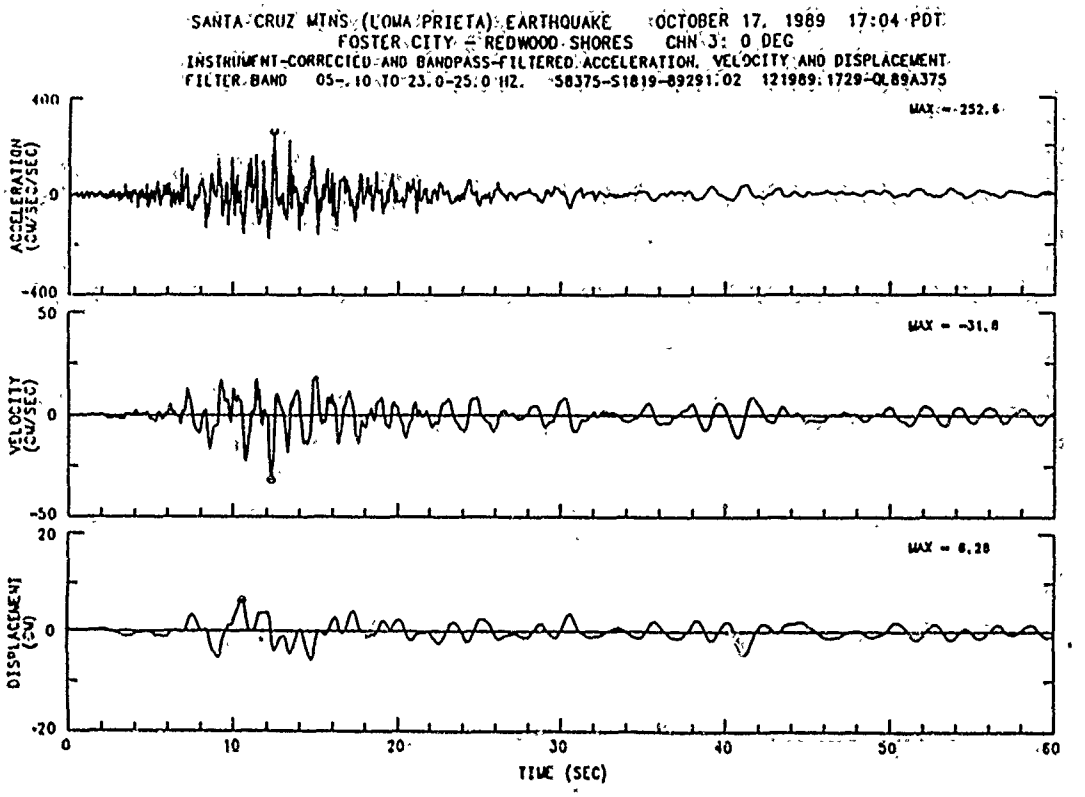
SARATOGA - ALOHA AVE.
CHN 3: 0 DEG

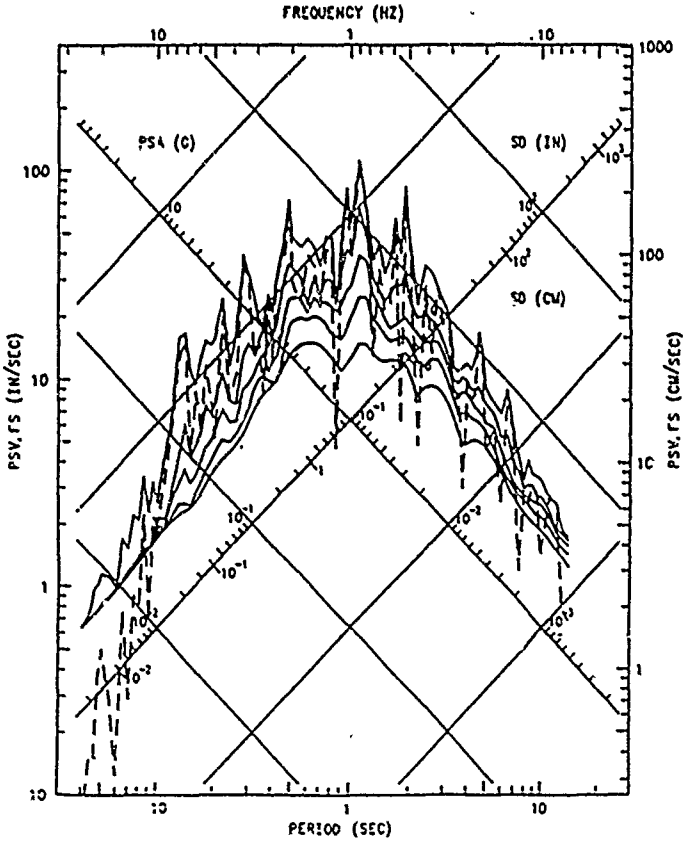
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.10 TO 23.0-25.0 HZ.
58065-S1715-89292.02
010290.1649-QL89A065

—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 385



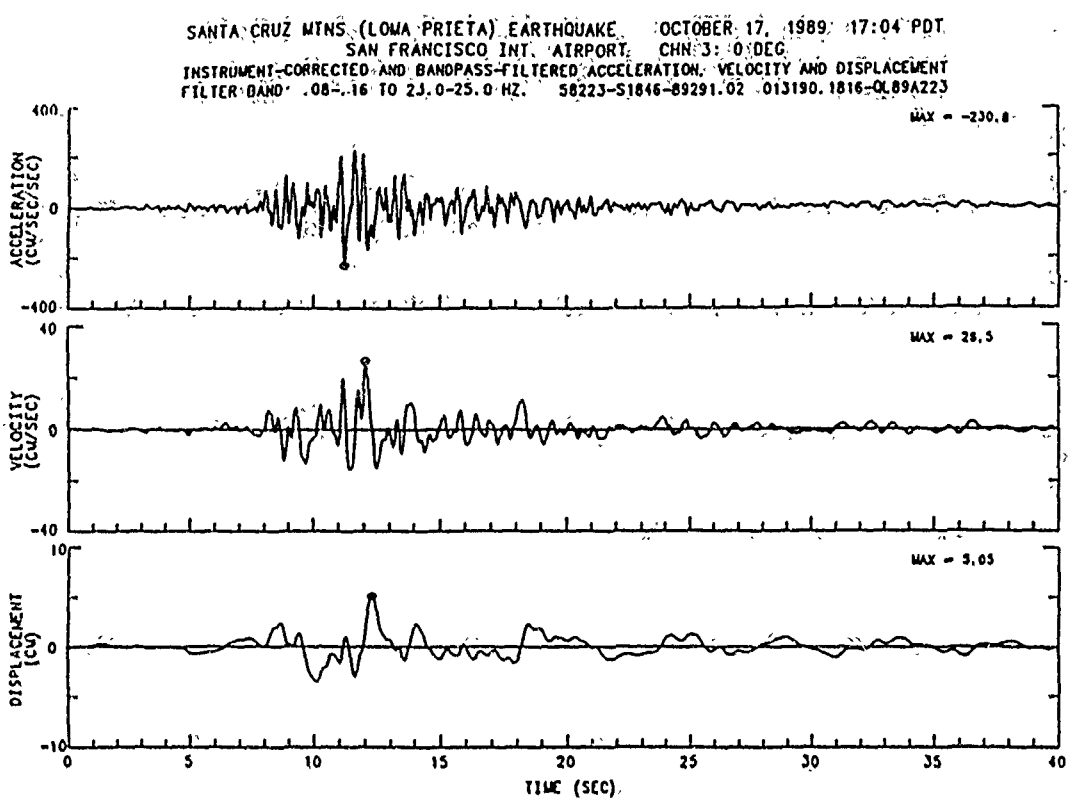


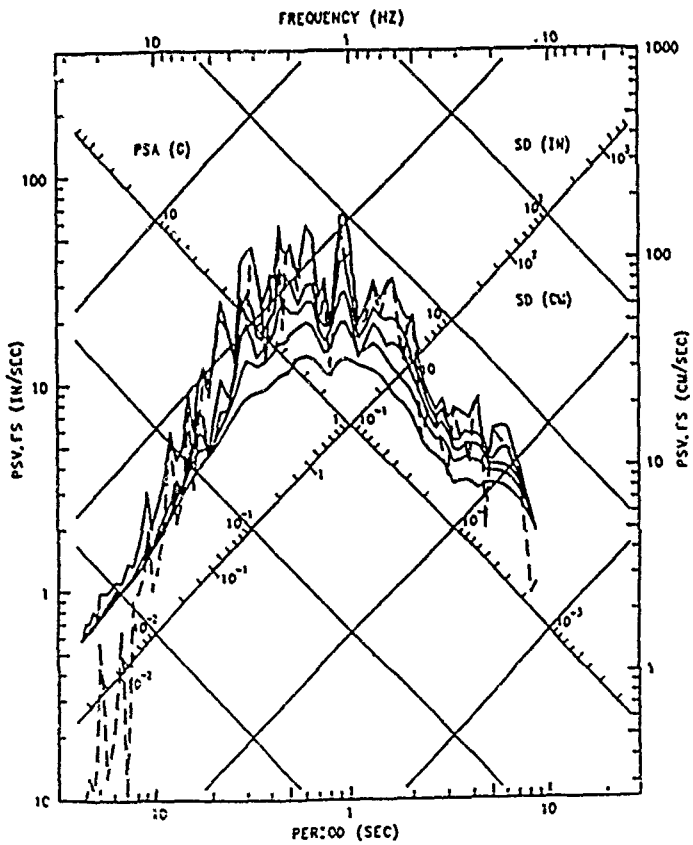
CDMG OSMS 90-01

FOSTER CITY - REDWOOD SHORES
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.10 TO 23.0-25.0 HZ.
58375-S1819-89291.02
011190.1542-QL89A375
—— RESPONSE SPECTRA: PSV, PSA & S
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 389



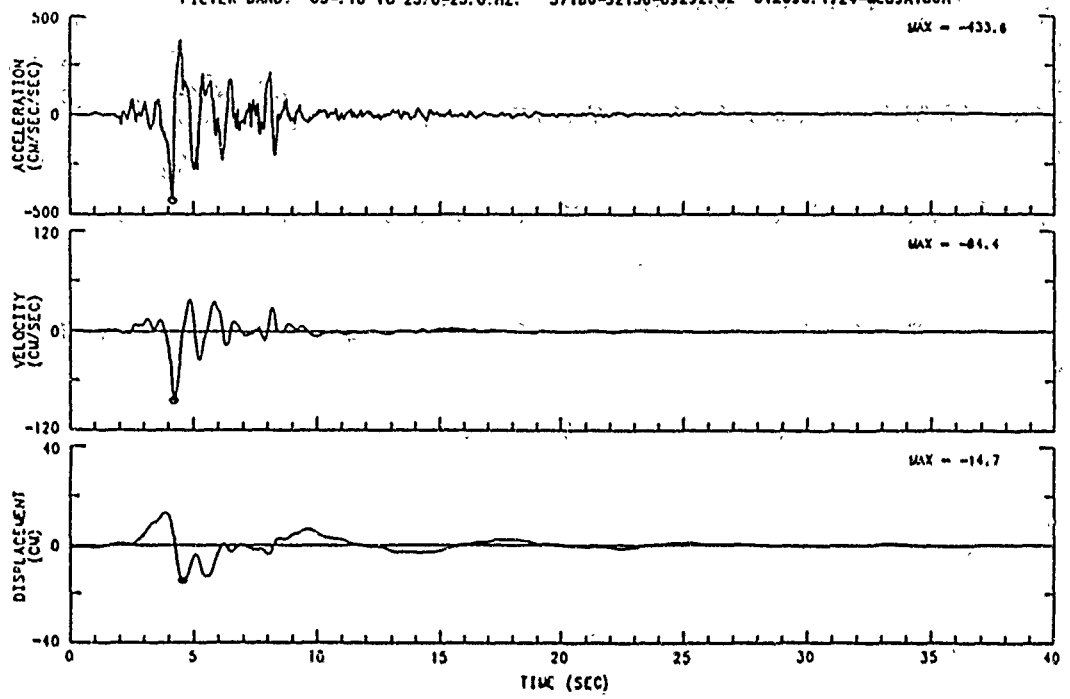


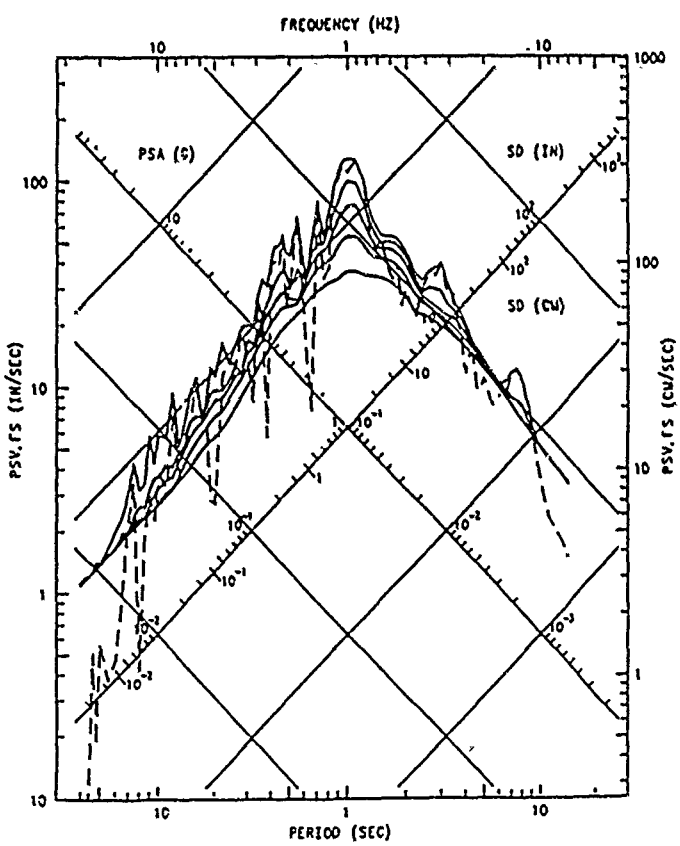
CDMG OSMS 90-01

SAN FRANCISCO INT. AIRPORT
CHN 3: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
58223-S1846-89291.02
013190.1830-QL89A223
—— RESPONSE SPECTRA: PSV, PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 391



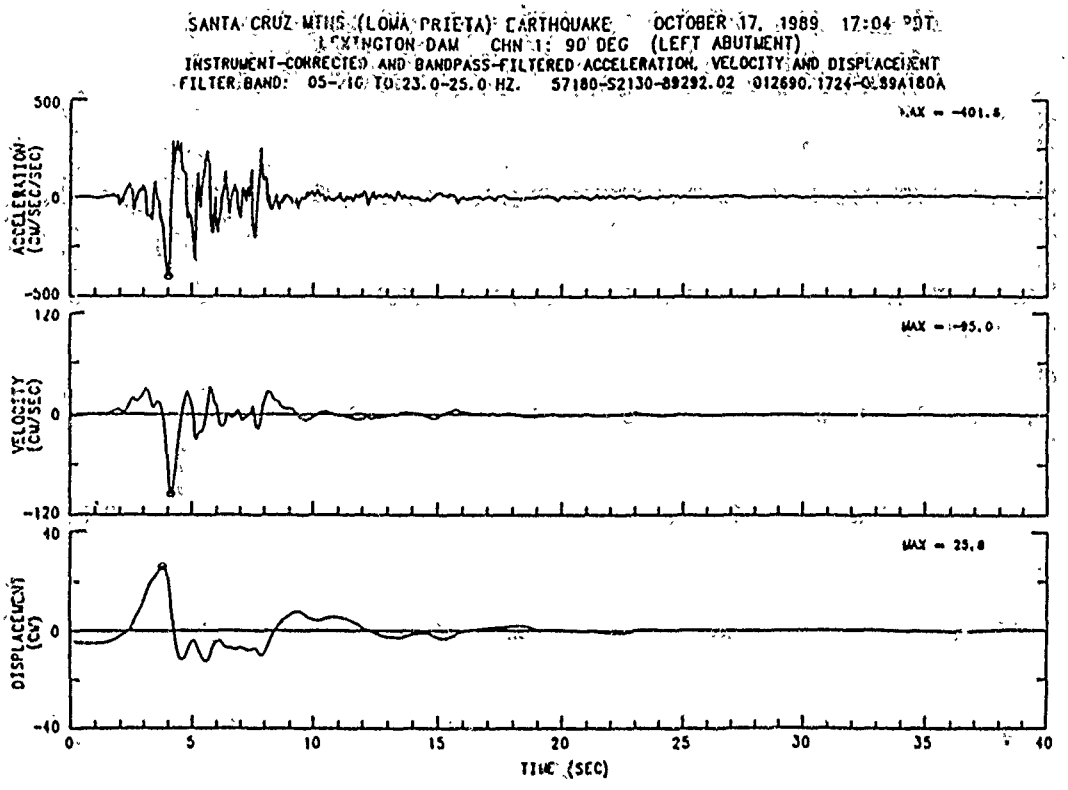


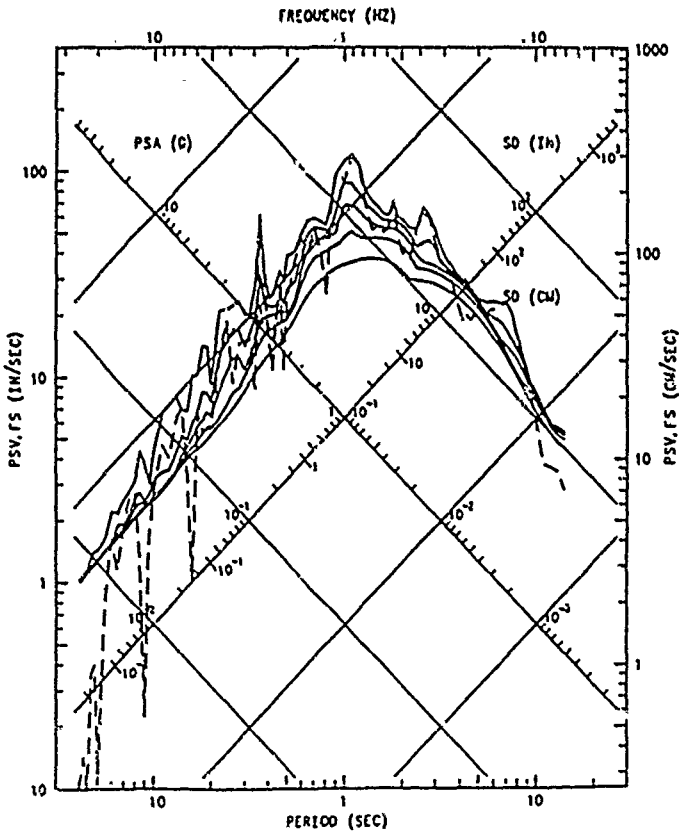
CDMG OSMS 90-01

LEXINGTON DAM
CHN 3: 0 DEG (LEFT ABUTMENT)
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.10 TO 23.0-25.0 HZ.
57180-S2130-89292.02
012990.1235-QL89A180A
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 395





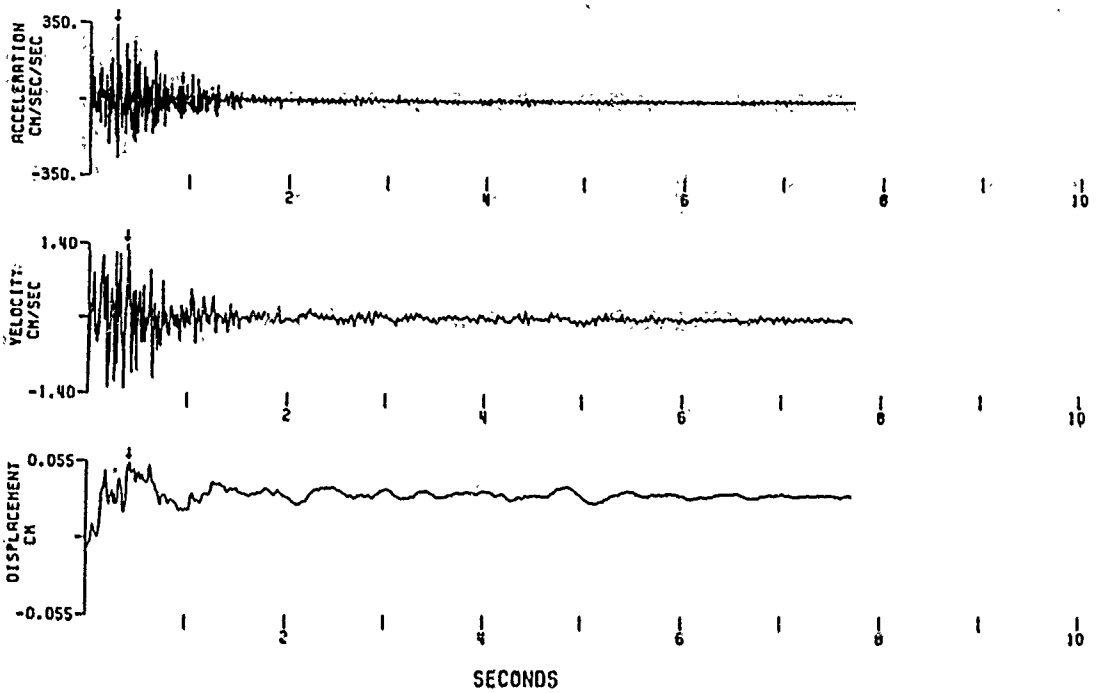
CDMG OSMS 90-01

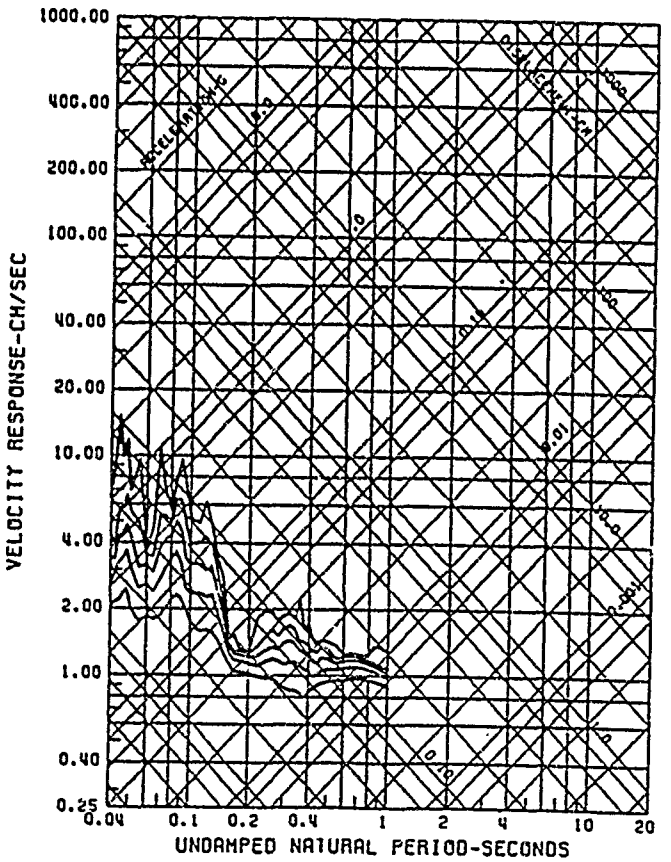
LEXINGTON DAM
CHN 1: 90 DEG (LEFT ABUTMENT)
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .05-.10 TO 23.0-25.0 HZ.
57180-S2130-89292.02
012990.1235-QL89A180A
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SANTA CRUZ MTNS
(LOMA PRIETA) EARTHQUAKE
OCTOBER 17, 1989 17:04 PDT

CAL 396

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT, 200 PPS
SITE 1: HOLMES LAKE
288 DEGREES
EARTHQUAKE OF MARCH 31, 1982 - 2102:20UTC
BUTTERWORTH AT 1.0 HZ, ORDER = 4
PEAK VALUES: ACCEL=340.21 CM/SEC/SEC, VELOCITY=1.37 CM/SEC, DISPL=0.05 CM





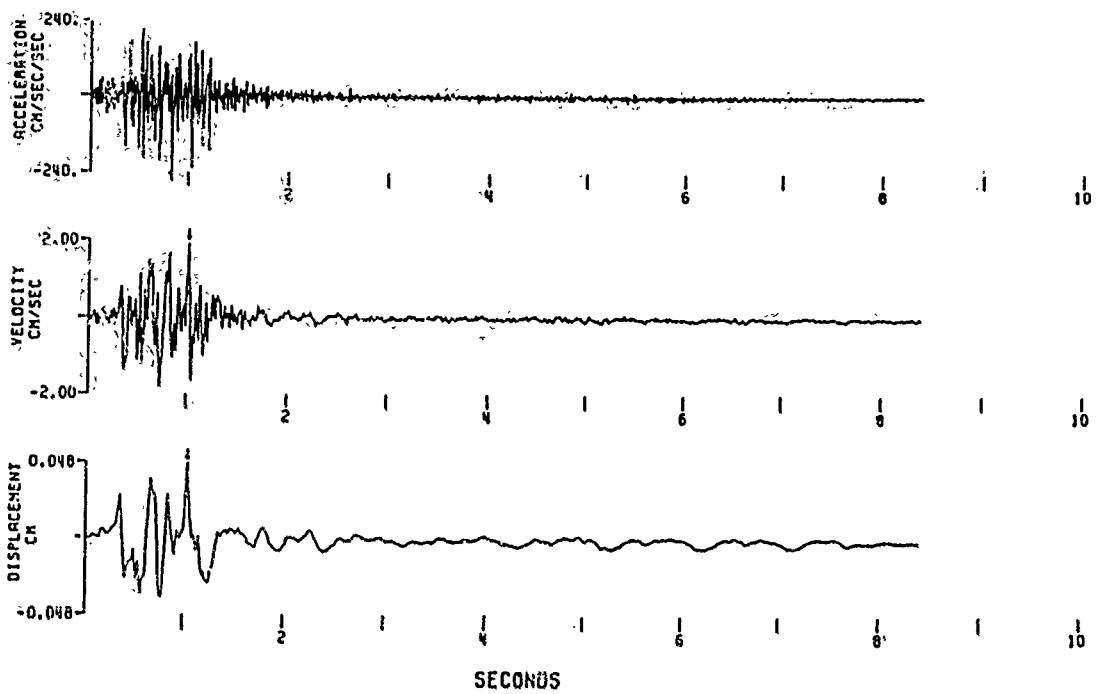
EPB OF 82-31

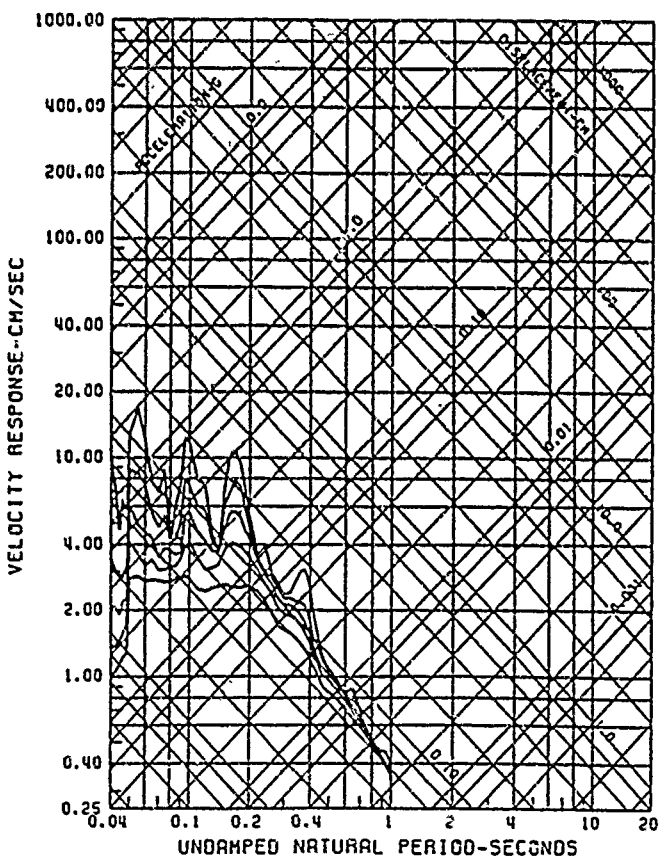
SEISMIC ENGINEERING BRANCH/USGS
FILTERS: BUTTERWORTH, ORDER 4,
1.000 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SITE 1: HOLMES LAKE
3/31/82, 21 2:20UTC 288

CAN 1

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT, 200 PPS
SITE 2, MITCHELL LAKE ROAD
28 DEGREES
EARTHQUAKE OF MARCH 31, 1982 - 2102:20UTC
BUTTERWORTH AT 1.0 HZ, ORDER = 4
PEAK VALUES: ACCEL=-231.46 CM/SEC/SEC, VELOCITY=1.91 CM/SEC, DISPL=0.05 CM





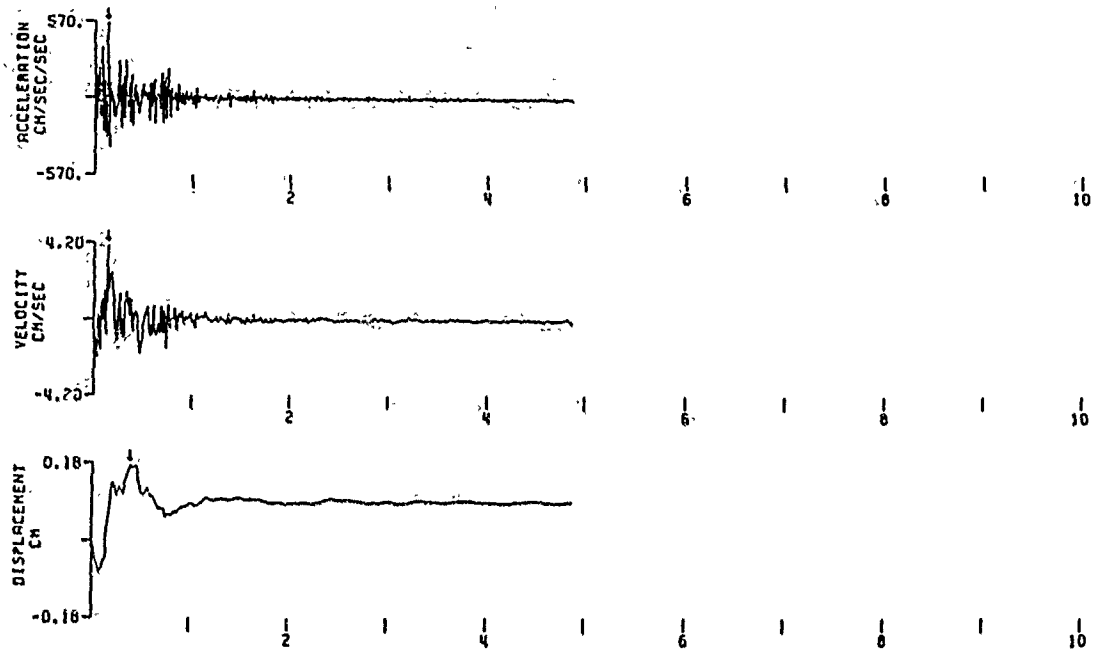
EPB OF 82-31

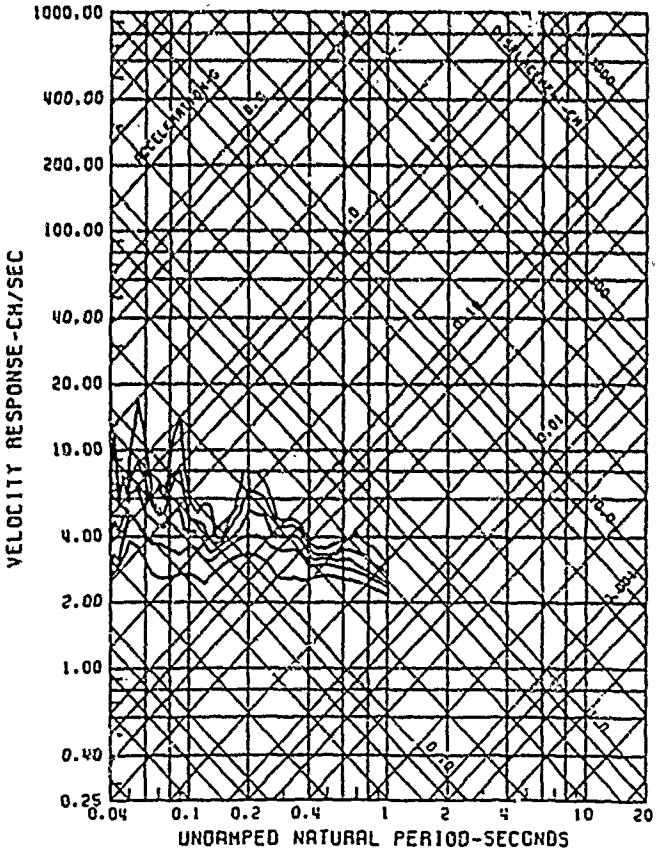
SEISMIC ENGINEERING BRANCH/USC
FILTERS: BUTTERWORTH, ORDER 4,
1.000 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SITE 2: MITCHELL LAKE ROAD
3/31/82, 21 2:20UTC 28

CAN 2

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT, 200 PPS
SITE 3: LOGGIE LODGE
99 DEGREES
EARTHQUAKE OF MARCH 31, 1982 - 2102:20UTC
BUTTERWORTH AT 1.0 HZ, ORDER = 4
PEAK VALUES: ACCEL=564.22 CM/SEC/SEC, VELOCITY=4.11 CM/SEC, DISPL=0.18 CM.





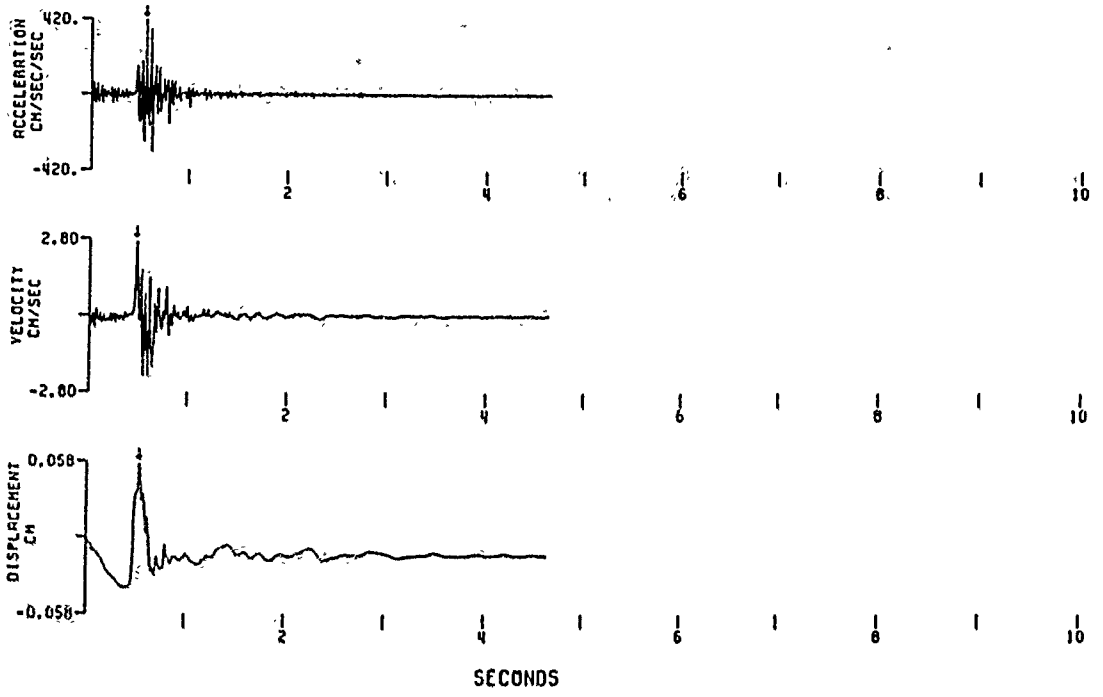
EPB OF 82-31

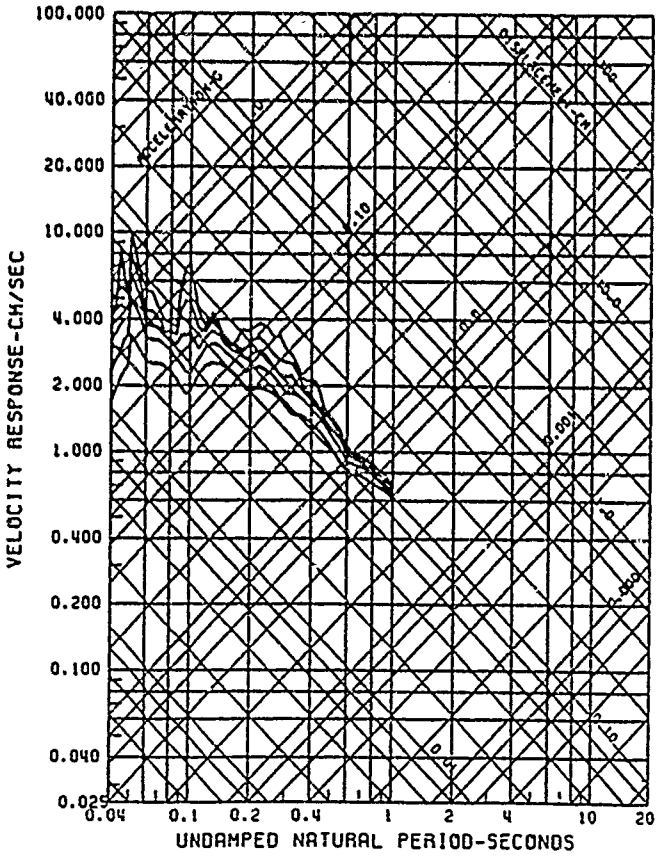
SEISMIC ENGINEERING BRANCH/USGS
FILTERS: BUTTERWORTH, ORDER 4,
1.000 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SITE 3: LOGGIE LODGE
3/31/82, 21 2:20UTC 99

CAN 3

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT, 200 PPS
SITE 4: INDIAN BROOK
321 DEGREES
EARTHQUAKE OF MARCH 31, 1982 - 2102:20UTC
BUTTERWORTH AT 1.0 HZ, ORDER = 4
PEAK VALUES: ACCEL=416.75 CM/SEC/SEC, VELOCITY=2.72 CM/SEC, DISPL=0.06 CM





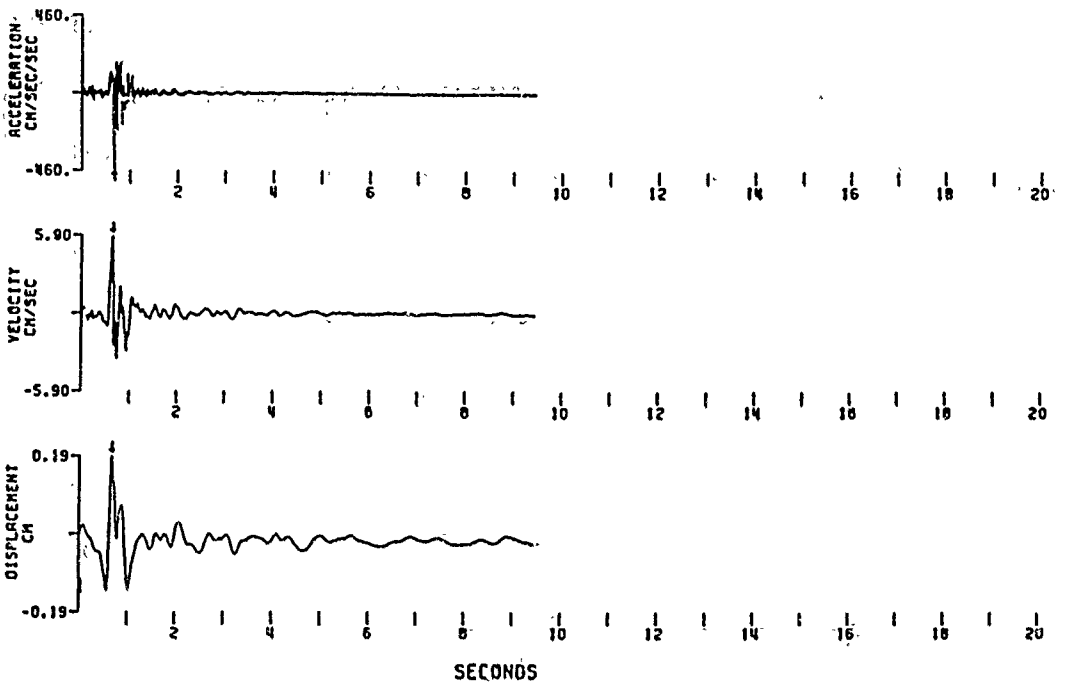
EPB OF 82-31

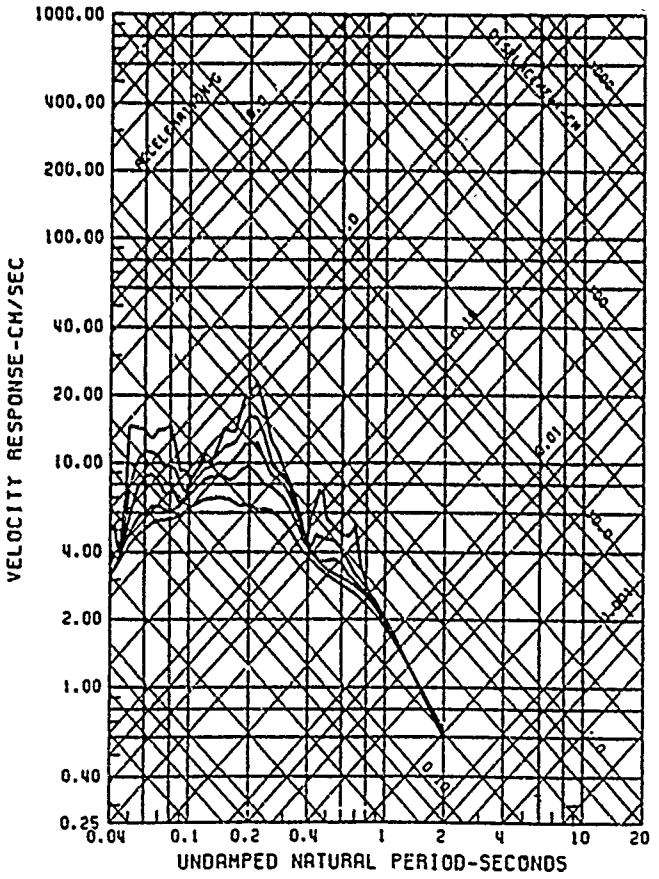
SEISMIC ENGINEERING BRANCH/USGS
FILTERS: BUTTERWORTH, ORDER 4.
1.000 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SITE 4: INDIAN BROOK
3/31/82, 21 2:20UTC 321

CAN 5

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 2, NAHANNI, NWT.
240 DEGREES
EARTHQUAKE OF NOVEMBER 9, 1985 - 0446 GMT
BUTTERWORTH HI .50 HZ, ORDER 4
PEAK VALUES: ACCEL=-450.96 CM/SEC/SEC, VELOCITY=5.86 CM/SEC, DISPL=0.19 CM





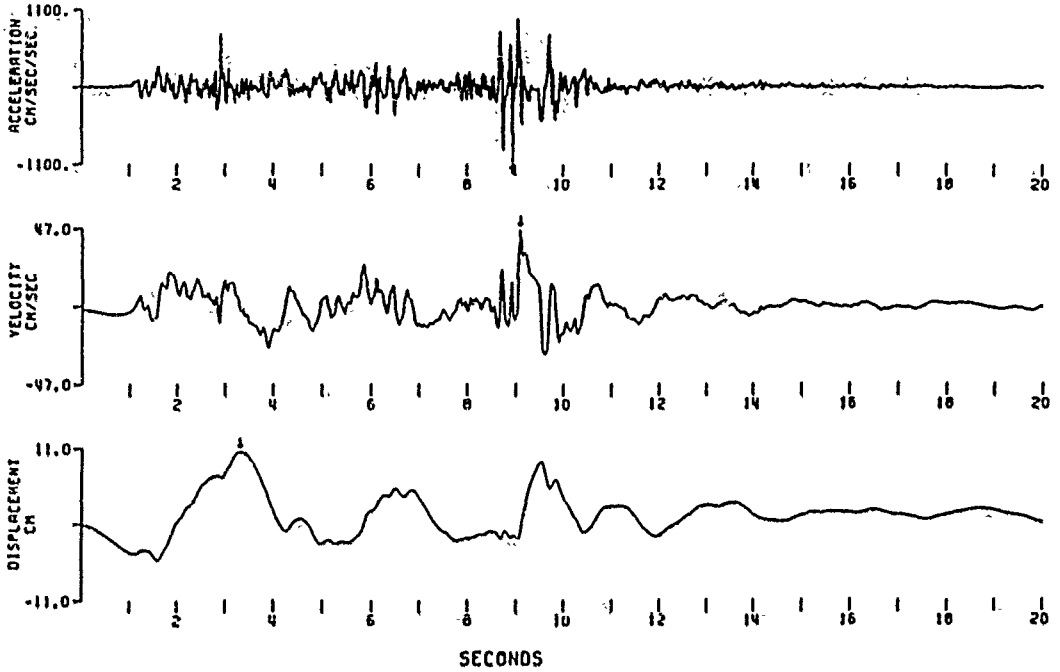
OFR-86-1-PGC

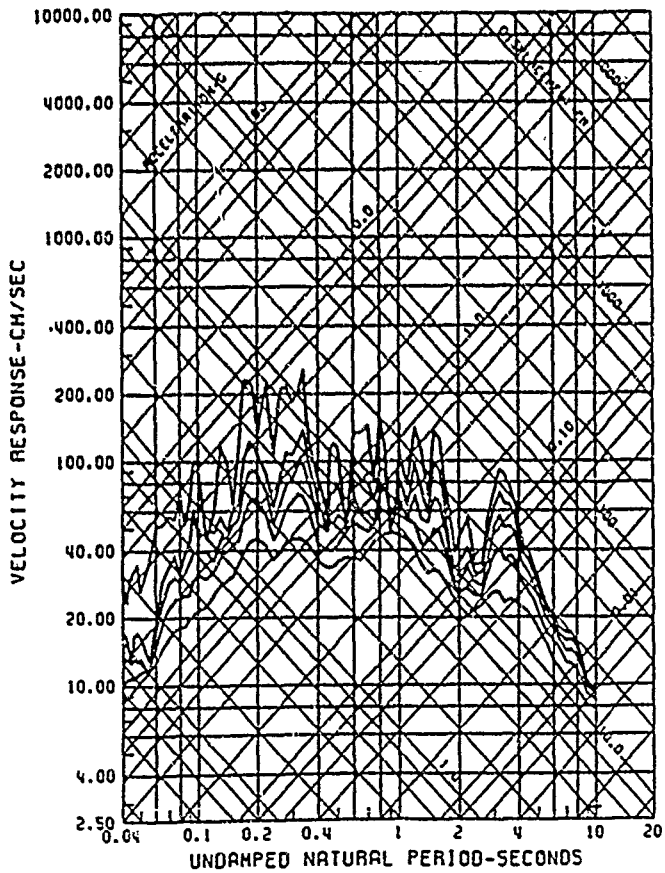
NATIONAL STRONG MOTION
DATA CENTER
0446UTC 240 DEGREES
FILTERS: BUTTERWORTH, ORDER 4
0.500 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SITE 2, NAHANNI, NWT, 11/09/85

CAN 8

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE1, NAHANNI, NWT
10 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0516 GMT
BUTTERWORTH AT .10 HZ, ORDER 4
PEAK VALUES: ACCEL=-1080.46 CM/SEC/SEC, VELOCITY=46.17 CM/SEC, DISPL=10.41 CM





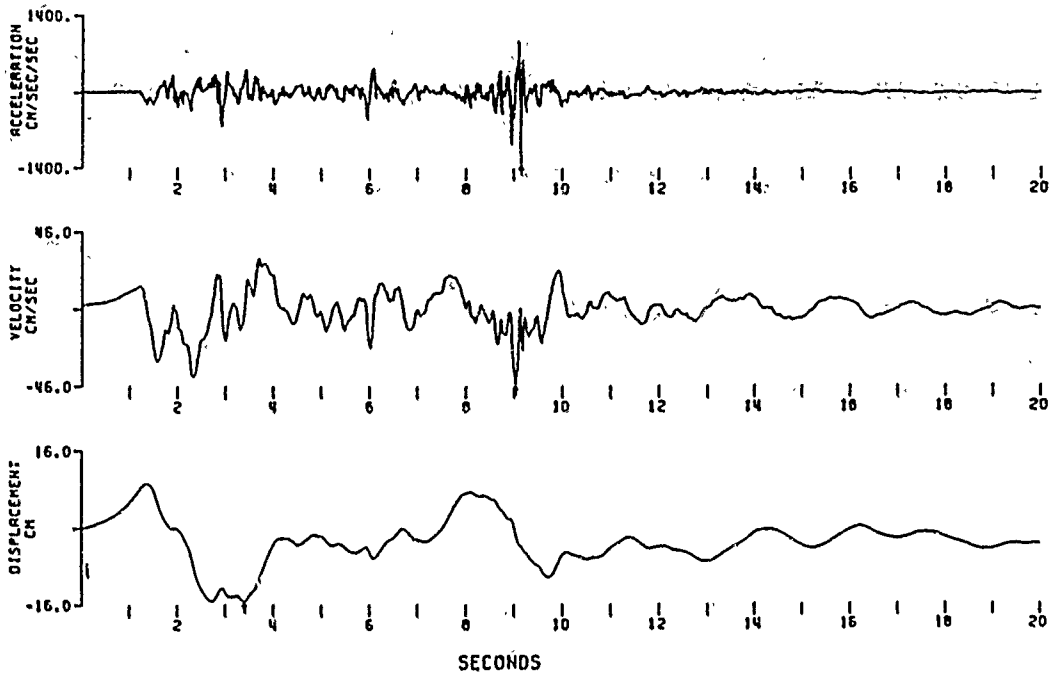
OFR-86-1-PGC

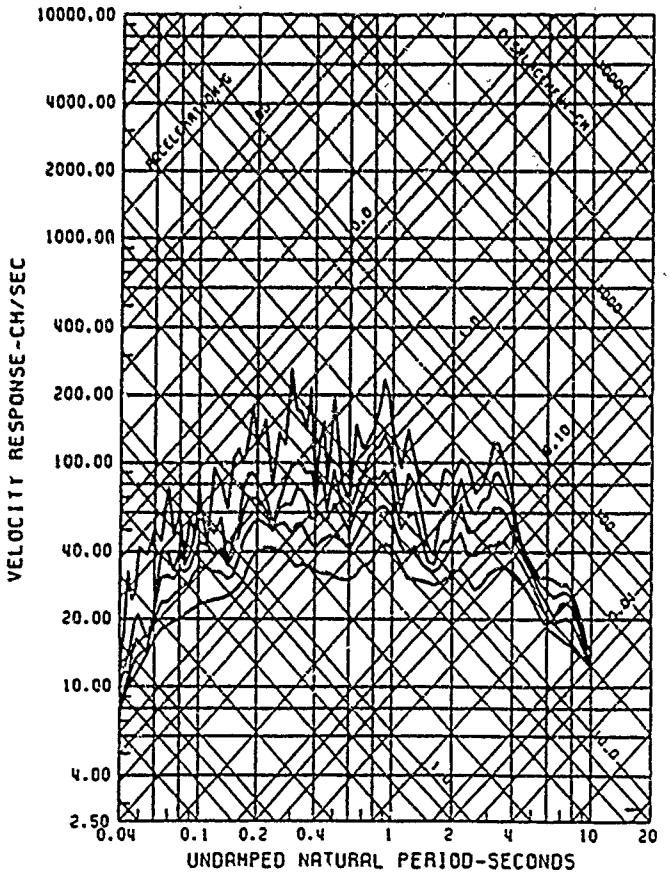
NATIONAL STRONG MOTION
DATA CENTER
0515UTC 10 DEGREES
FILTERS: BUTTERWORTH, ORDER 4
0.100 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

SITE 1, NAHANNI, NWT
12/23/85

CAN 9

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE1. NAHANNI. NWT
280 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0516 GMT
BUTTERWORTH AT .10 HZ, ORDER 4
PEAK VALUES: ACCEL=-1319.08 CM/SEC/SEC, VELOCITY=-45.06 CM/SEC, DISPL=-15.25 CM





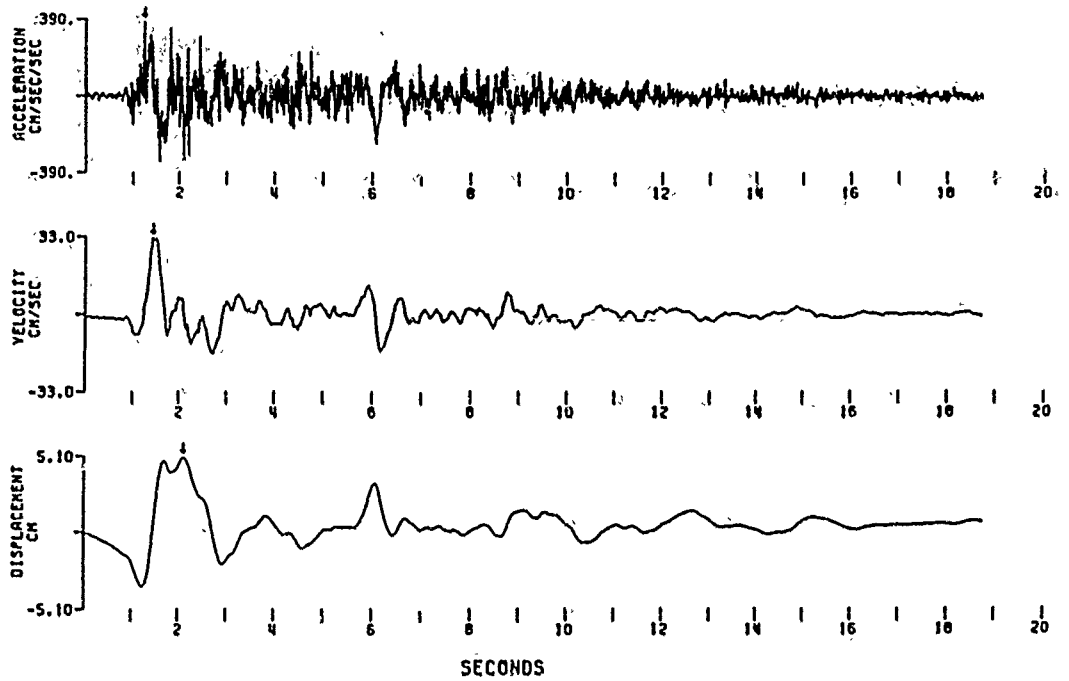
OFR-86-1-PGC

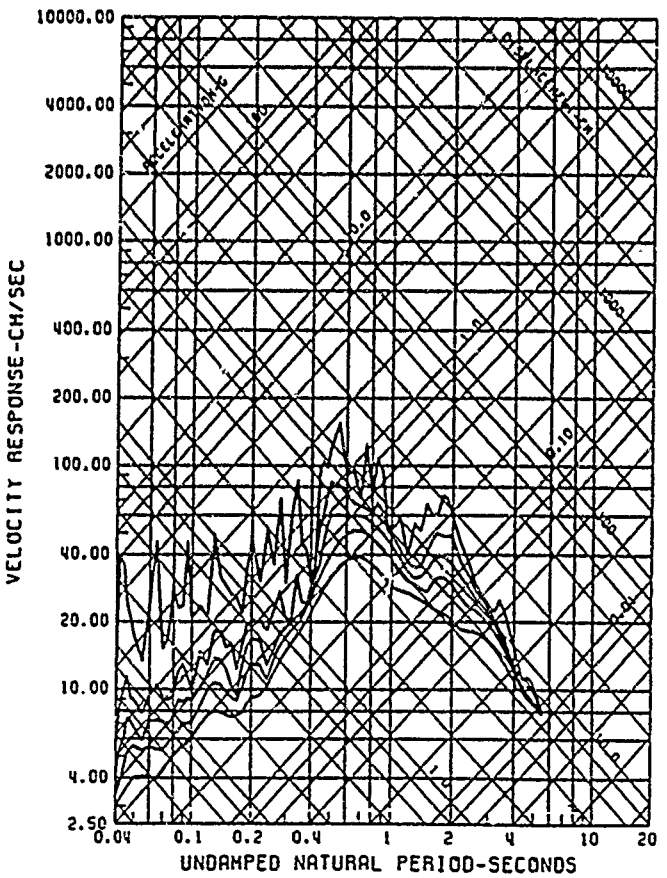
NATIONAL STRONG MOTION
DATA CENTER
0515UTC 280 DEGREES
FILTERS: BUTTERWORTH, ORDER 4
0.100 HZ; ANTIALIRS 50 - 100 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

SITE 1, NAHANNI, NWT, 12/23/85

CAN 10

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 2, NAHANNI, NWT
330 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
PEAK VALUES: ACCEL=382.37 CM/SEC/SEC, VELOCITY=32.60 CM/SEC, DISPL=5.02 CM





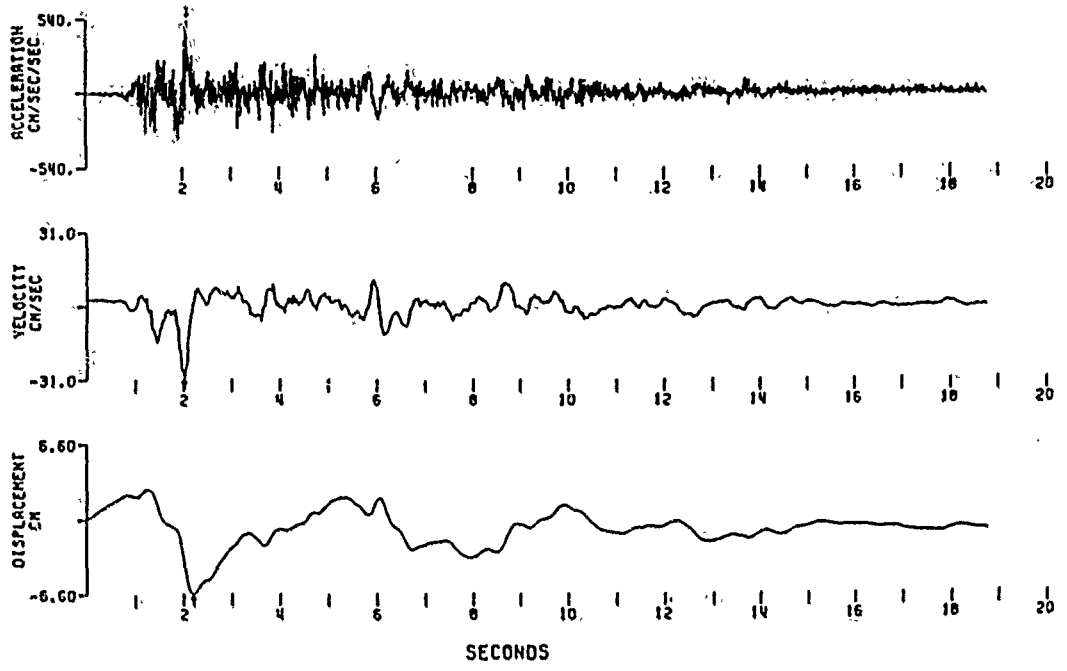
OFR-86-1-PGC

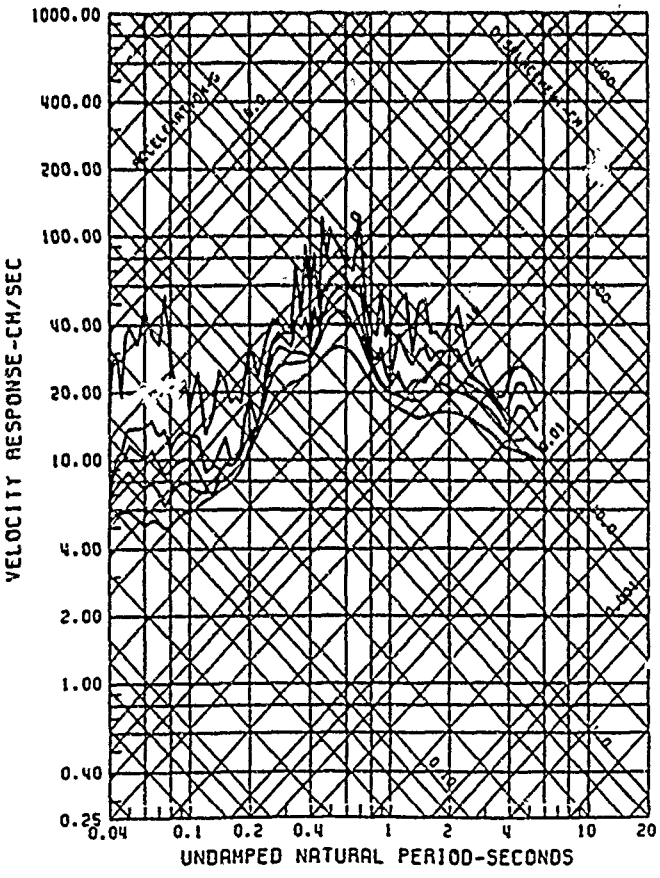
NATIONAL STRONG MOTION
DATA CENTER
0515UTC 330 DEGREES
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SITE 2, NAHANNI, NWT, 12/23/85

CAN 11

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 2, NAHANNI, NWT
240 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
PEAK VALUES: ACCEL=534.44 CM/SEC/SEC, VELOCITY=-30.27 CM/SEC, DISPL=-6.60 CM





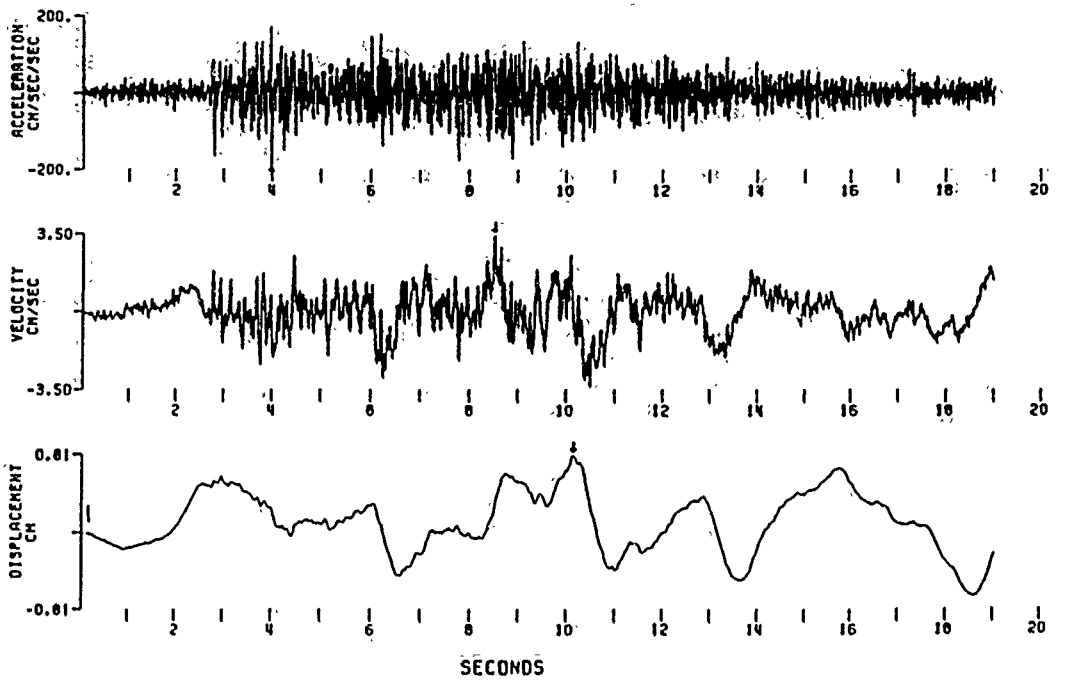
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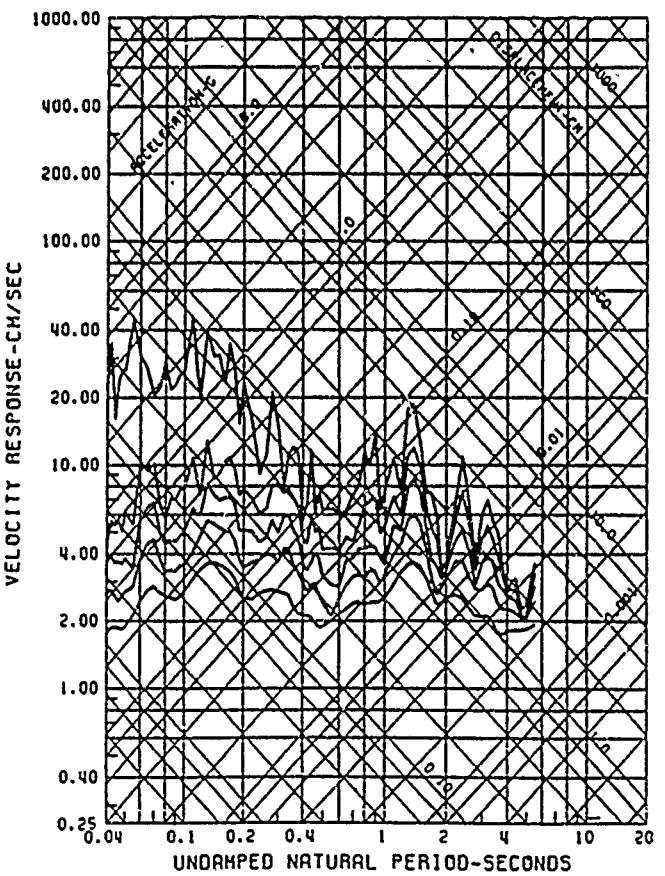
NATIONAL STRONG MOTION
DATA CENTER
0515UTC 240 DEGREES
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SITE 2, NAHANNI, NWT, 12/23/85

CAN 12

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE 3, NAHANNI, NWT
360 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 0515 UTC
BUTTERWORTH AT .167 HZ, ORDER 4
PEAK VALUES: ACCEL=-190.20 CM/SEC/SEC, VELOCITY=3.43 CM/SEC, DISPL=0.80 CM





OFR-86-1-PGC

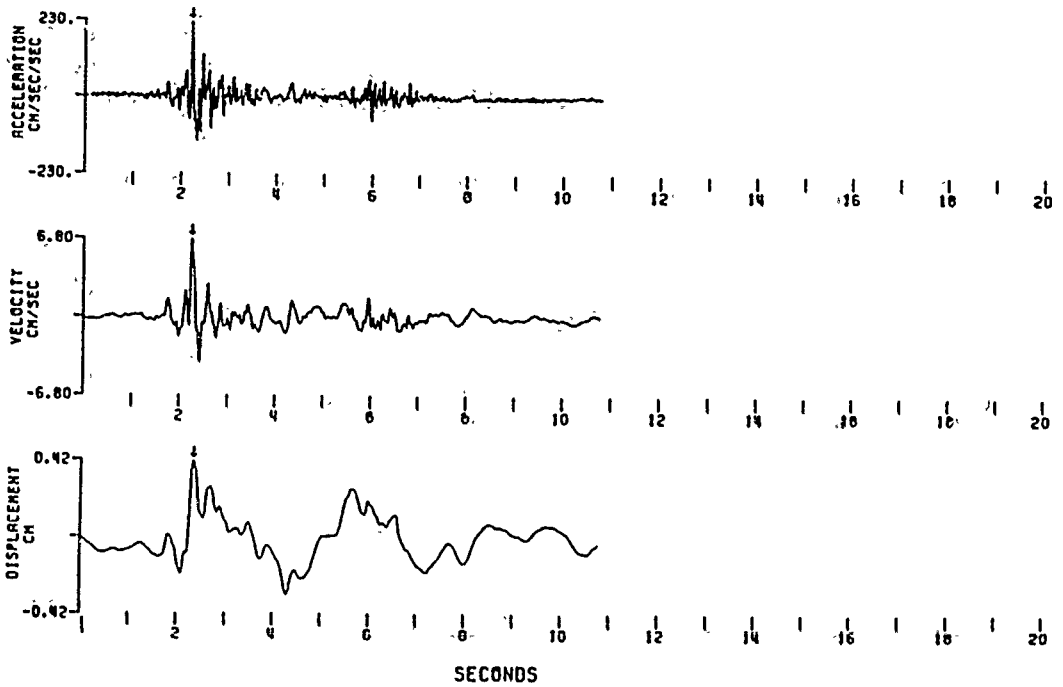
NATIONAL STRONG MOTION DATA CENTER

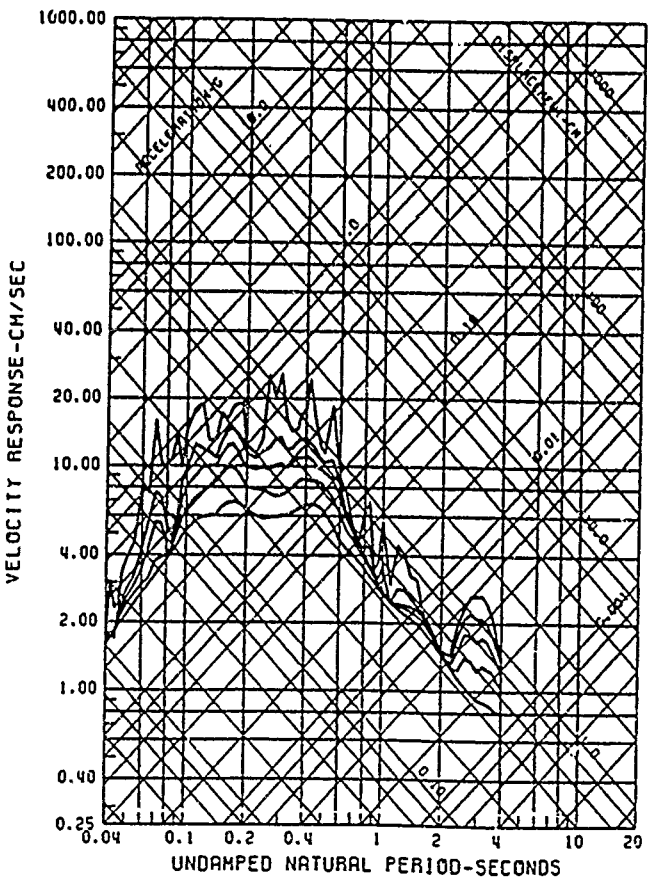
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SITE 3, NAHANNI, NWT
12/23/85, 0515UTC 360

CAN 13

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
SITE1, NAHANNI, NWT
10 DEGREES
EARTHQUAKE OF DECEMBER 23, 1985 - 0548 GMT
BUTTERWORTH AT .25 HZ, ORDER 4
PEAK VALUES: ACCEL=224.13 CM/SEC/SEC, VELOCITY=6.78 CM/SEC, DISPL=0.41 CM





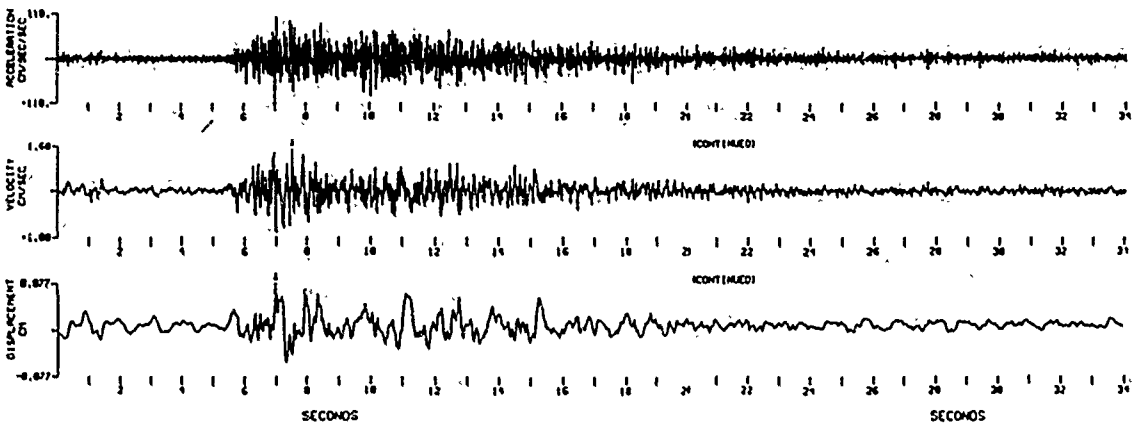
CAN OFR-86-1-PGC

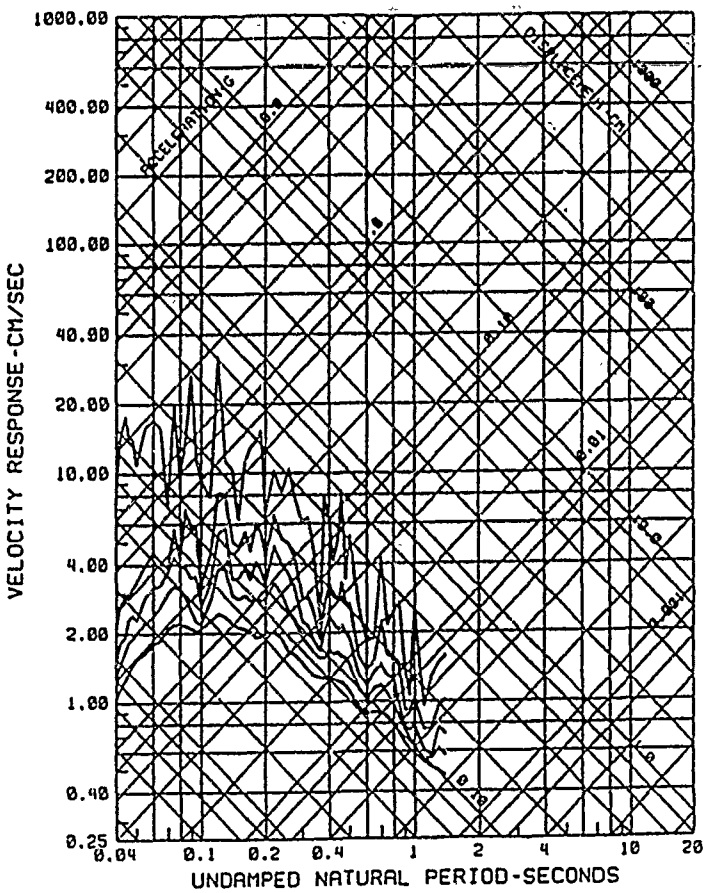
NATIONAL STRONG MOTION
DATA CENTER
0548UTC 10 DEGREES
FILTERS: BUTTERWORTH, ORDER 4
0.250 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SITE1, NAHANNI, NWT, 12/23/85.

CAN 15

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SAGUENAY EARTHQUAKE OF 1988 11 25 2346 UT
SITE 16: CHICOUTIMI-NORD, QUEBEC
AL = 214 DEGREES: AZ.= 18 DEG.: DIST.= 43 KM
4TH-ORDER BUTTERWORTH AT 0.667 HZ
PEAK VALUES: ACCEL=-104.48 CM/SEC/SEC, VELOCITY=1.51 CM/SEC, DISPL=0.08 CM





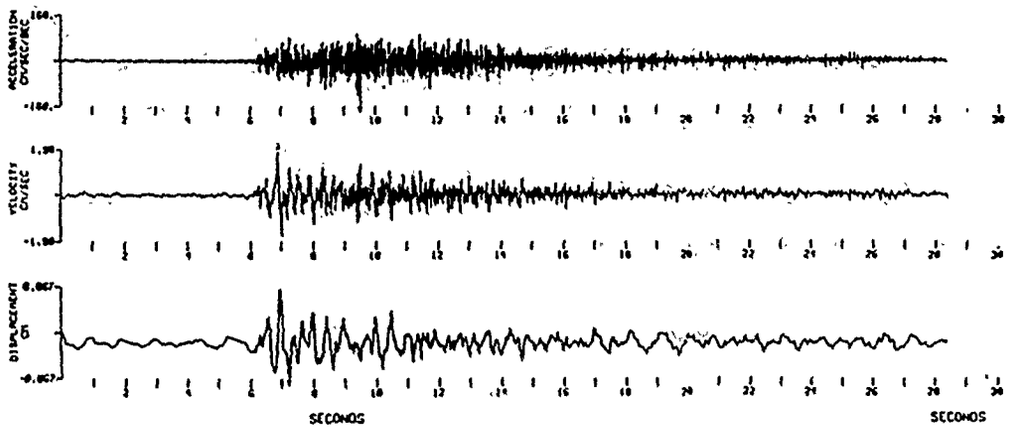
CAN OFR-1966

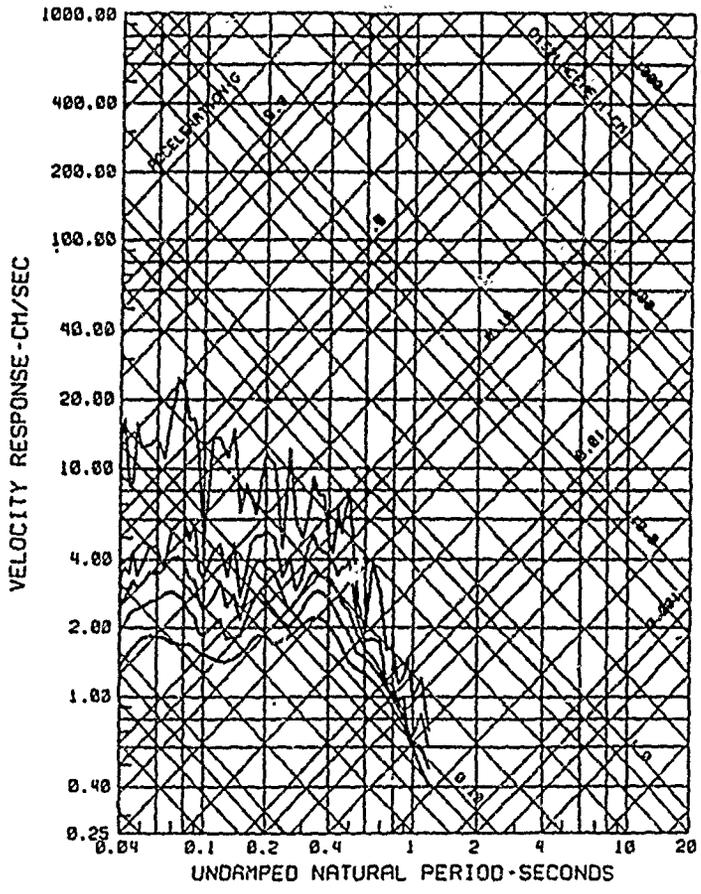
LONGITUDINAL
FILTERS: BUTTERWORTH, ORDER 4
0.667 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

SITE 16: CHICOUTIMI-NORD
1988 11 25 2346 UT:

CAN 17

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SAGUENAY EARTHQUAKE OF 1988 11 25 2346 UT
SITE 17: ST-ANDRE, QUEBEC
+L = 0 DEGREES: AZ.= 291 DEG.; DIST.=64 KM
4TH-ORDER BUTTERWORTH AT 0.800 HZ
PEAK VALUES: ACCEL=-152.92 CM/SEC/SEC. VELOCITY=1.83 CM/SEC. DISPL=-0.07 CM





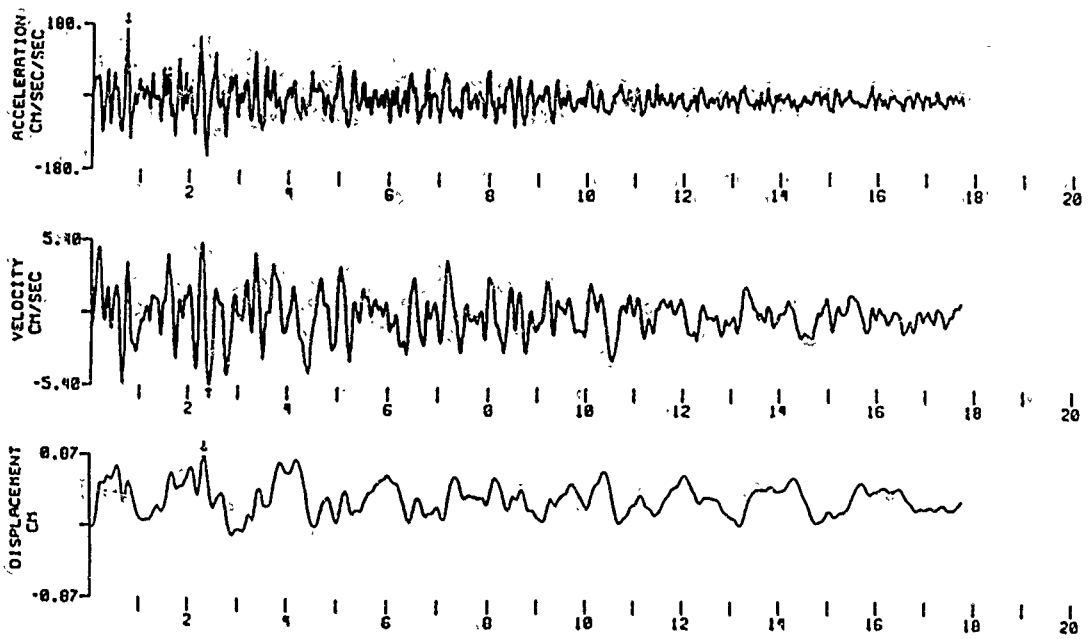
CAN OFR-1966

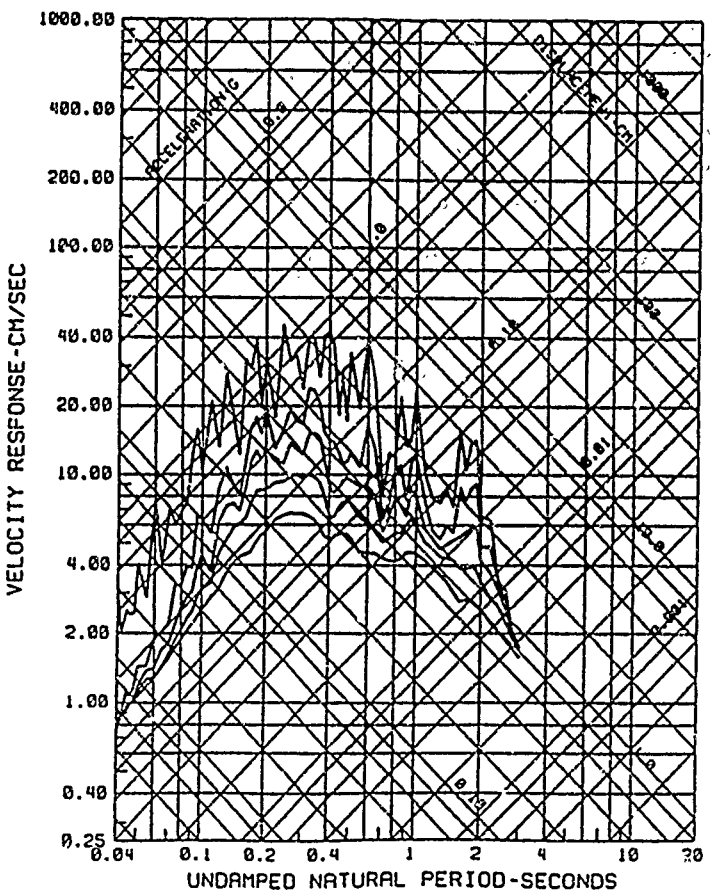
LONGITUDINAL
FILTERS: BUTTERWORTH, ORDER 4
0.800 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

SITE 17: ST-ANDRE
1988 11 25 2346 UT

CAN 18

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SAGUENAY EARTHQUAKE OF 1988 11 25 2346 UT
SITE 7: BAIE-ST-PAUL, QUEBEC
T. = 85 DEGREES: AZ. = 146 DEG.: DIST.= 91 KM
4TH-ORDER BUTTERWORTH AT 0.333 HZ
PEAK VALUES: ACCEL=170.62 CM/SEC/SEC. VELOCITY=-5.34 CM/SEC. DISPL=0.87 CM





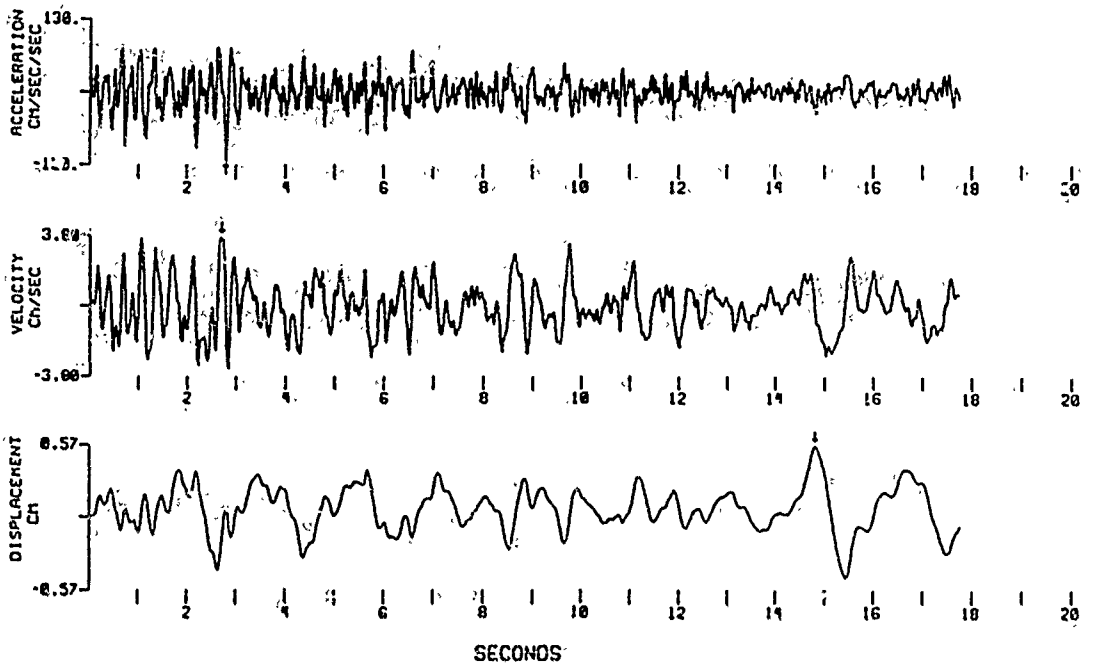
CAN OFR-1966

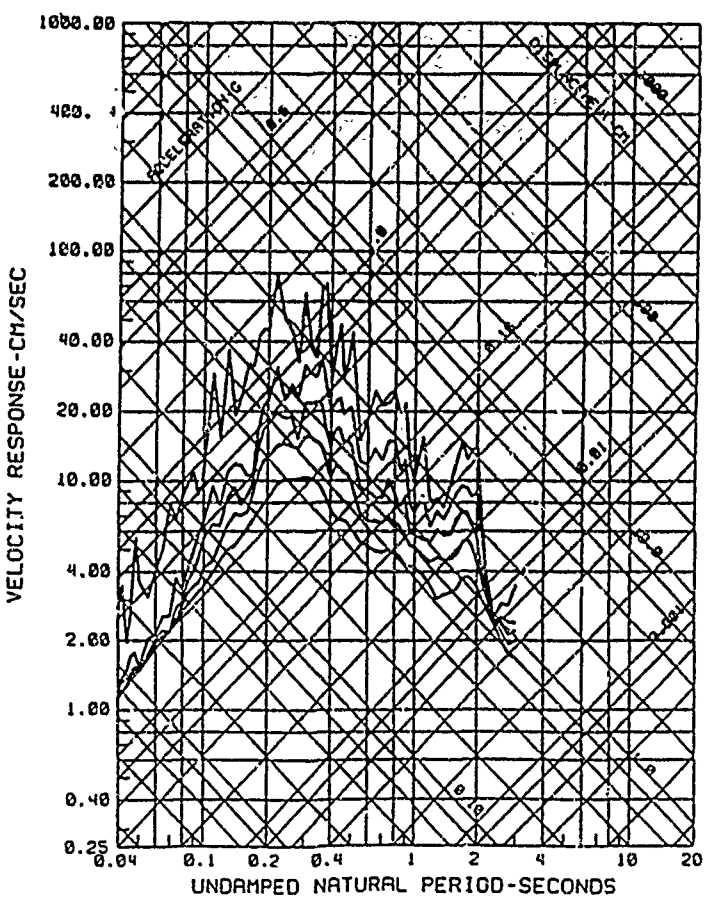
LONGITUDINAL
FILTERS: BUTTERWORTH, ORDER 4
0.333 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

SITE 7: BAIE-ST-PAUL
1988 11 25 2346 UT

CAN 21

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SAGUENAY EARTHQUAKE OF 1988 11 25 2346 UT
SITE 7: BAIE-ST-PAUL, QUEBEC
+L - 175 DEGREES: AZ = 146 DEG.: DIST = 91 KM
4TH-ORDER BUTTERWORTH AT 0.333 HZ
PEAK VALUES: ACCEL=-122.84 CM/SEC/SEC, VELOCITY=3.76 CM/SEC, DISPL=0.56 CM





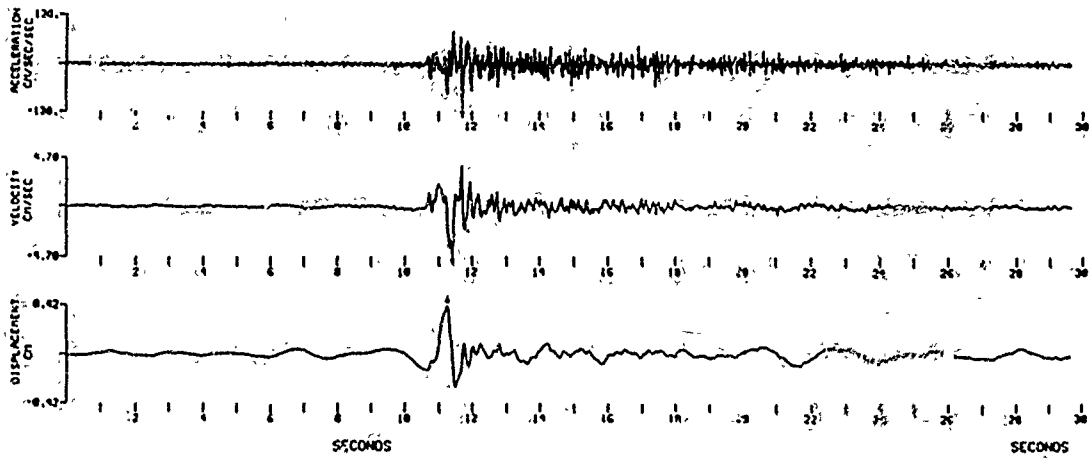
CAN OFR-1966

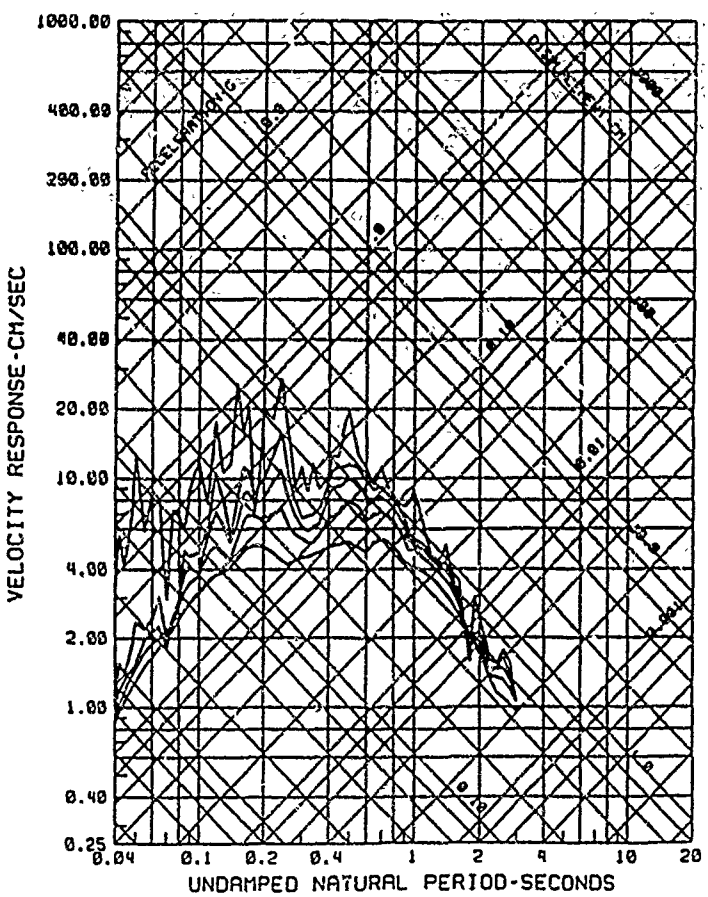
TRANSVERSE
FILTERS: BUTTERWORTH, ORDER 4
0.333 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

SITE 7: BAIE-ST-PAUL
1988 11 25 2346 UT

CAN 22

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
GEOLOGICAL SURVEY OF CANADA
SAGUENAY EARTHQUAKE OF 1988 11 25 2346 UT
SITE 8: LA MALBAIE, QUEBEC
AL = 63 DEGREES: AZ = 123 DEG.: DIST. = 93 KM
4TH-ORDER BUTTERWORTH AT 0.333 HZ
PEAK VALUES: ACCEL=-121.82 CM/SEC/SEC. VELOCITY=-4.65 CM/SEC. DISPL=0.41 CM





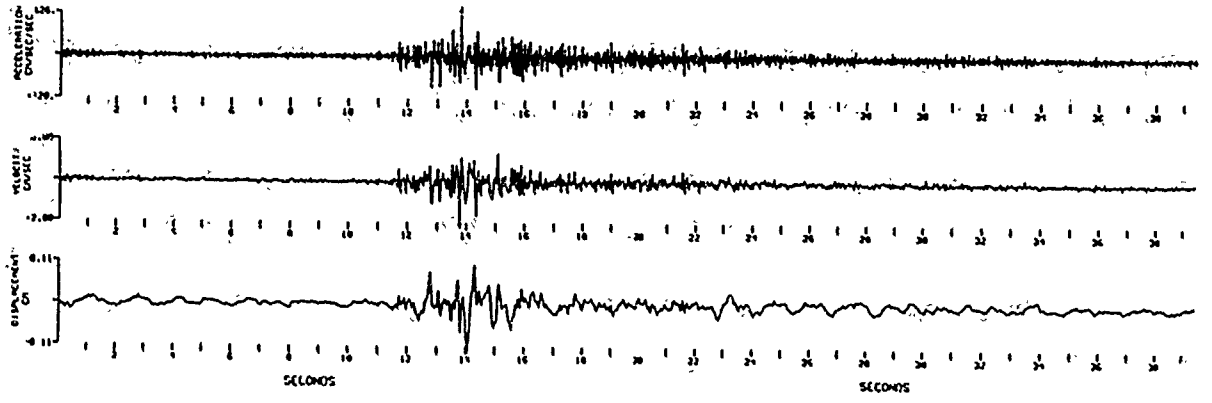
CAN OFR-1966

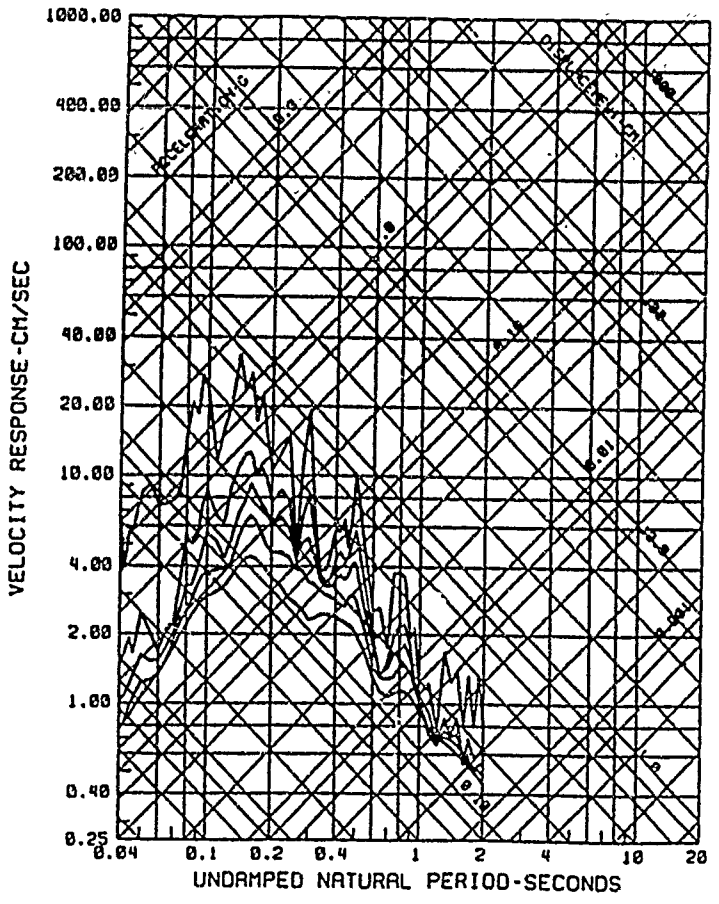
LONGITUDINAL
FILTERS: BUTTERWORTH, ORDER 4
0.333 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

SITE 8: LA MALBAIE
1988 11 25 2346 UT

CAN 23

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS.
GEOLOGICAL SURVEY OF CANADA
SAGUENAY EARTHQUAKE OF 1988 11 25 2346 UT
SITE 1: ST-FERREOL, QUEBEC
L = 0 DEGREES: AZ. = 166 DEG.; DIST.= 114 KM
4TH-ORDER BUTTERWORTH AT 0.500 HZ
PEAK VALUES: ACCEL=118.79 CM/SEC/SEC, VELOCITY=-2.71 CM/SEC, DISPL=-0.11 CM



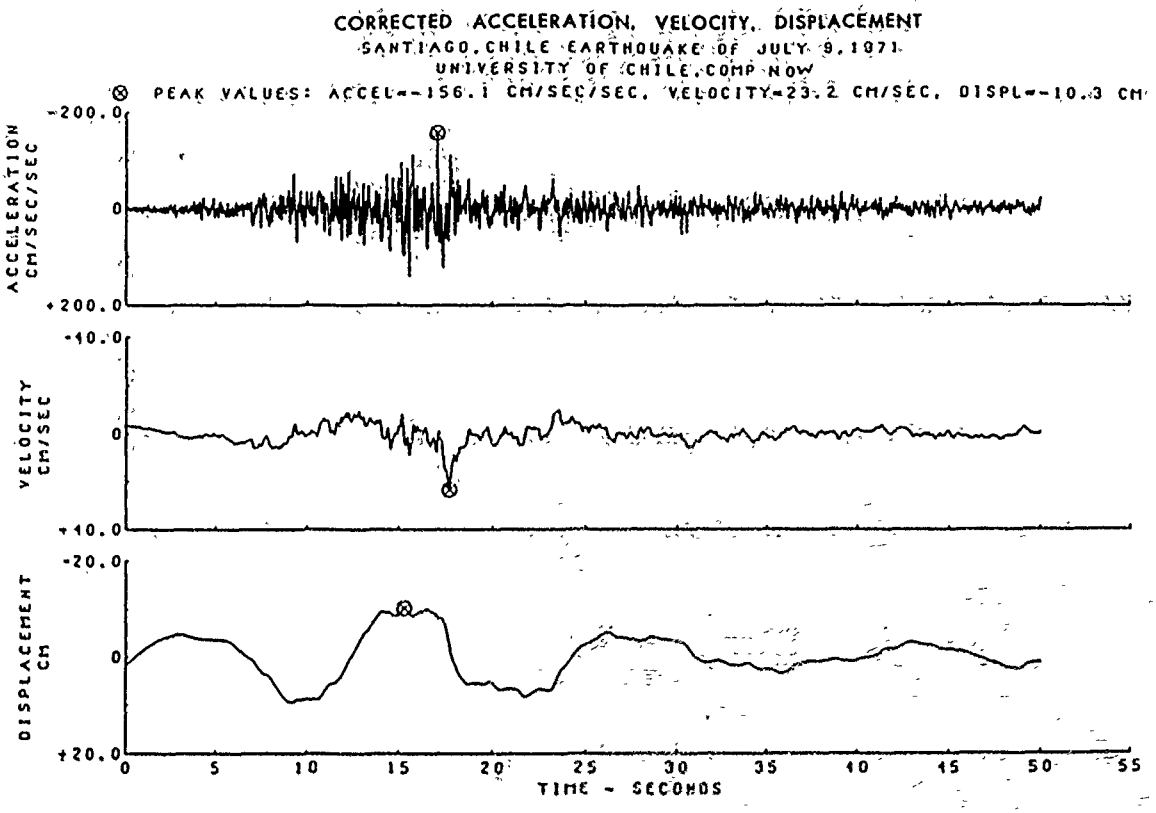


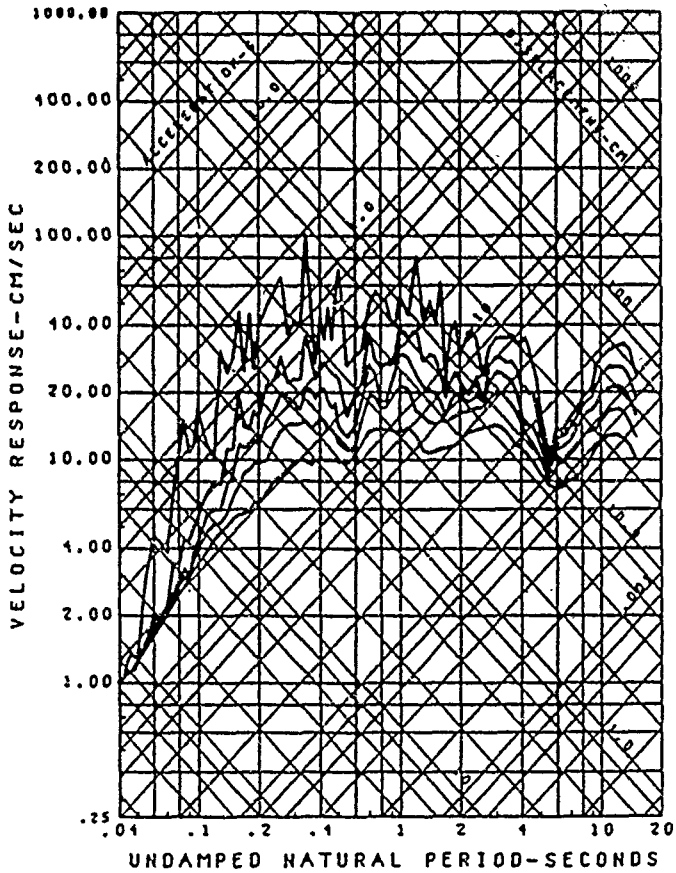
CAN OFR-1966

LONGITUDINAL
FILTERS: BUTTERWORTH, ORDER 4
0.500 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0.2.5.10.20 PERCENT

SITE 1: ST-FERREOL
1988 11 25 2346 UT

CAN 24





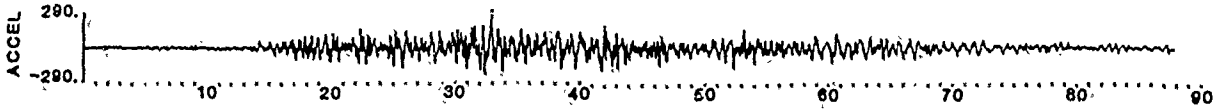
USGS OF 76-609

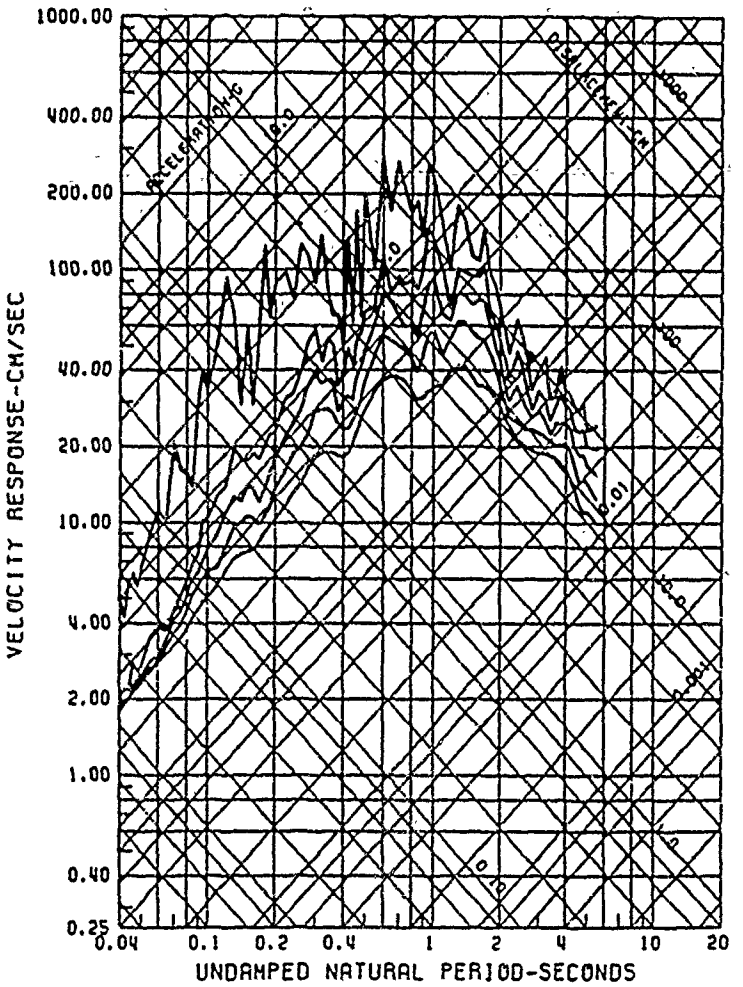
SEISMIC ENGINEERING
BRANCH/USGS
UNIV OF CHILE, N10W
CRITICAL DAMPING
0, 2, 5, 10, 20 PERCENT

SANTIAGO, CHILE
7/9/71

CHL 1

UNCORRECTED ACCELEROGRAM
VALPARAISO EL ALMENDRAL, D.I.C
050 DEGREES
EARTHQUAKE OF MARCH 3, 1985
PEAK VALUES (CM/SEC/SEC): 287.73





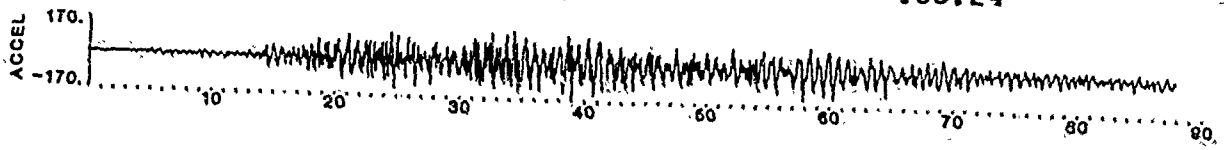
USGS OF 87-195

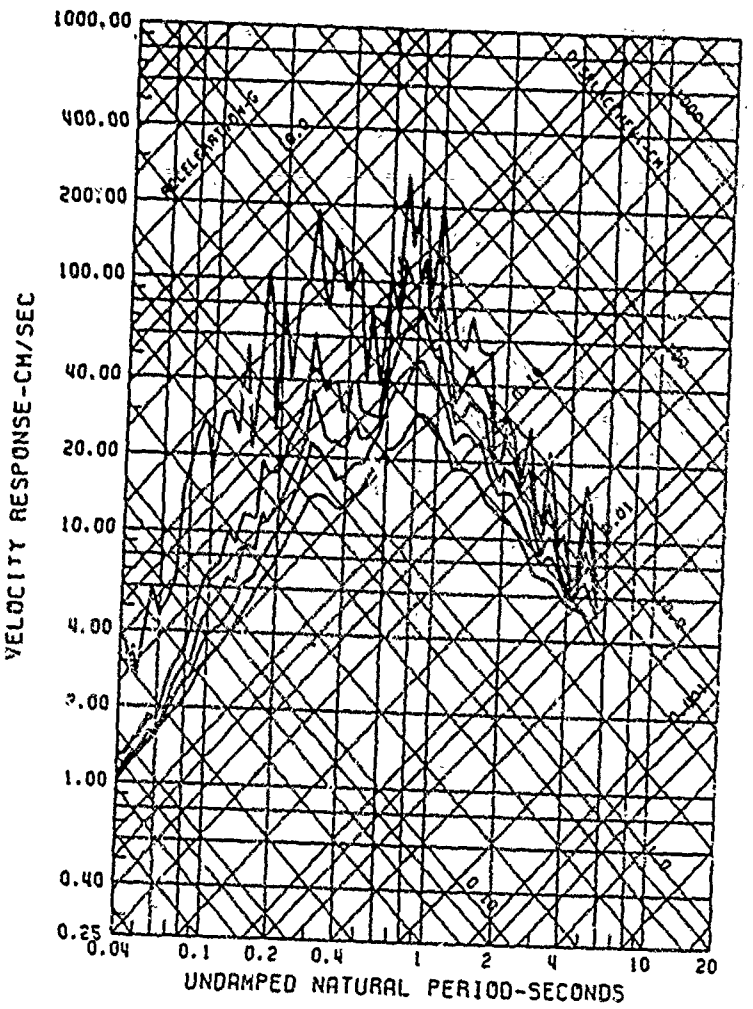
NATIONAL STRONG MOTION
DATA CENTER
07UTC 050 DEG
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ; ANTIALIAS 0 - 0 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

VALPARAISO EL ALMENDRAL
D.I.C. 3/03/85, 2247

CHL 2

UNCORRECTED ACCELEROGRAM
VALPARAISO EL ALMENDRAL, D.I.C
140 DEGREES
EARTHQUAKE OF MARCH 3, 1985
PEAK VALUES (CM/SEC/SEC): -160.24





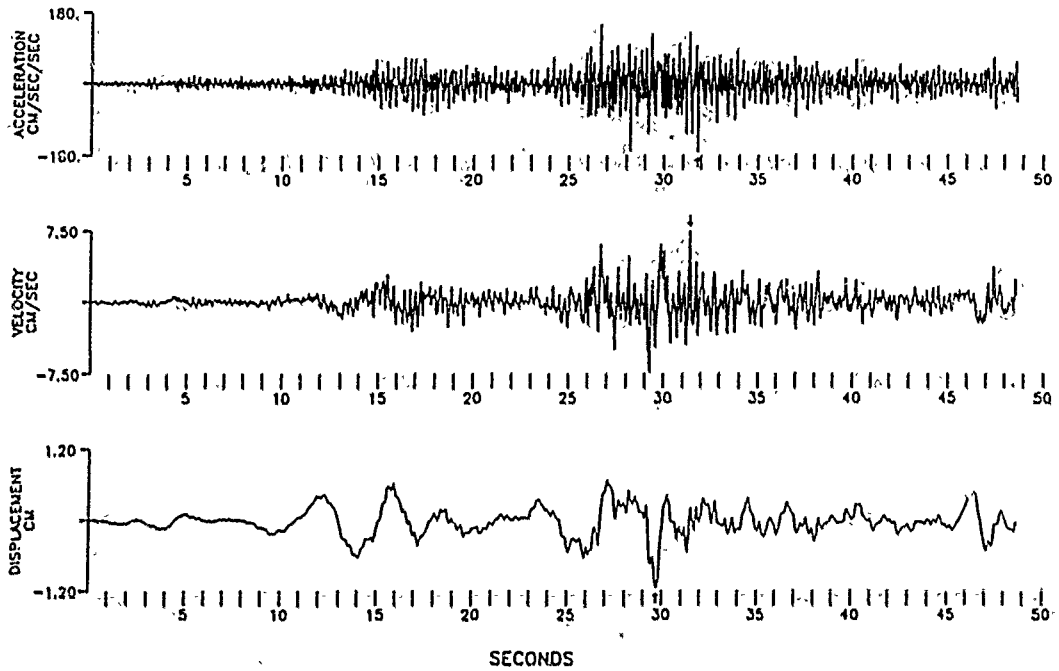
USGS OF 87-195

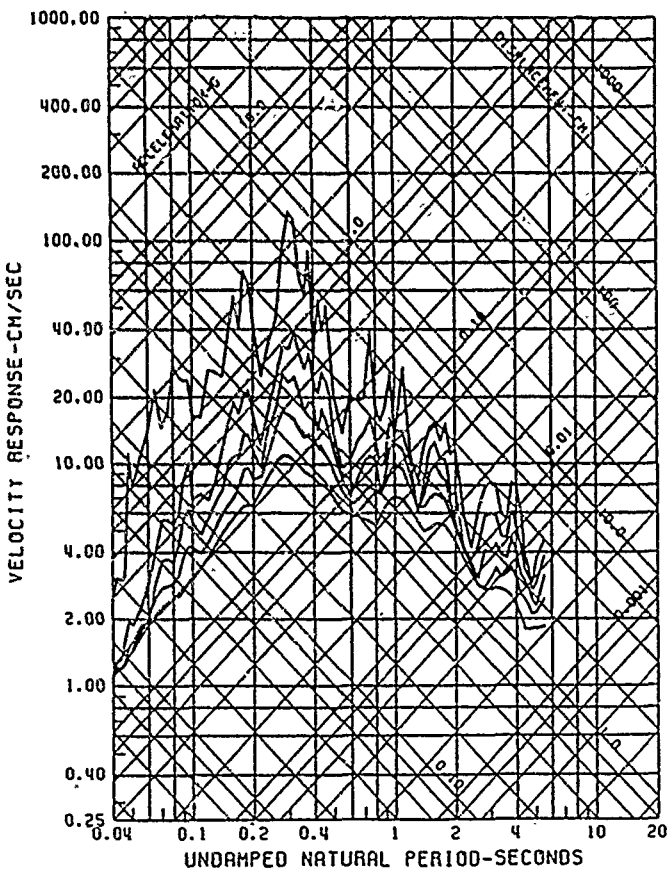
NATIONAL STRONG MOTION
DATA CENTER
07UTC 140
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ: ANTIALIAS 0 - 0 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

VALPARAISO EL ALMENDRAL
D.I.C, 3/03/85, 2247

CHL 3

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT AT 200. SPS
LALIGUA
290 DEGREES
EARTHQUAKE OF MARCH 3, 1985
BUTTERWORTH FILTER AT .167 HZ, ORDER 4
PEAK VALUES: ACCEL= -173.64 CM/SEC/SEC, VELOCITY= 7.47 CM/SEC, DISPL= -1.15 CM





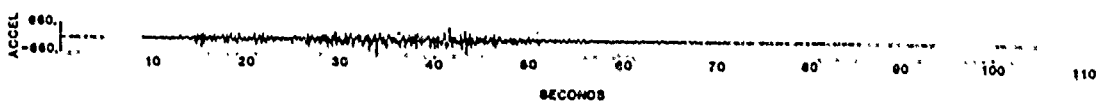
USGS OF 87-195

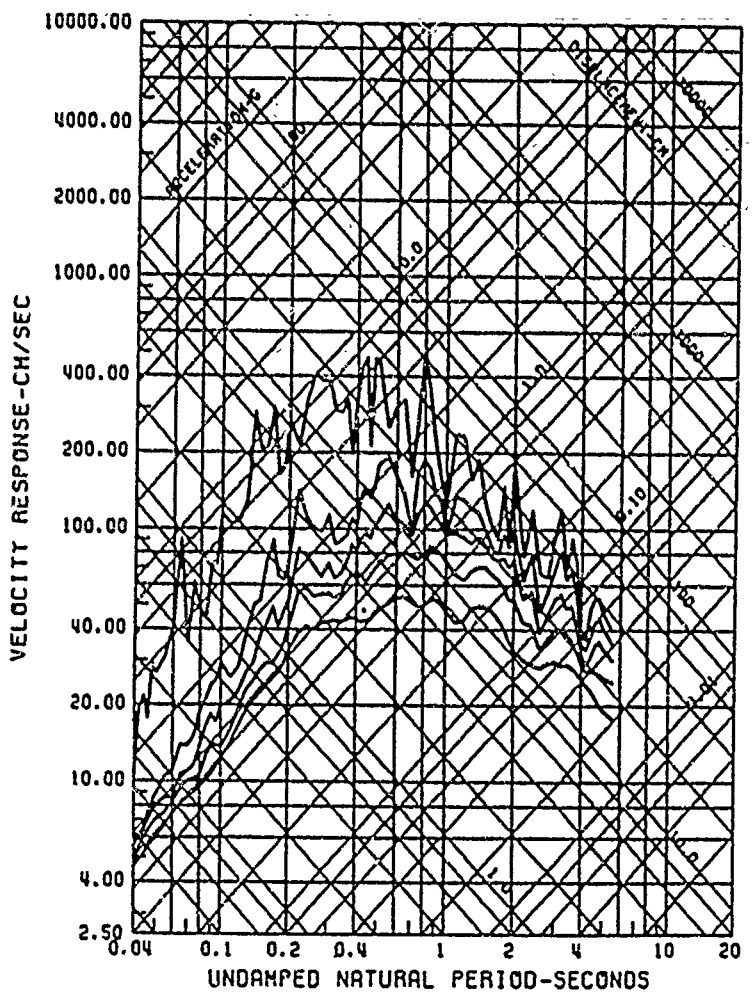
NATIONAL STRONG MOTION
DATA CENTER
290 DEGREES
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

LALIGUA, EARTHQUAKE
MARCH 3, 1985

CHL 8

UNCORRECTED ACCELEROGRAM
LLOLLEO, D.I.C
010 DEGREES
EARTHQUAKE OF MARCH 3, 1985
PEAK VALUES (CM/SEC/SEC): -655.77





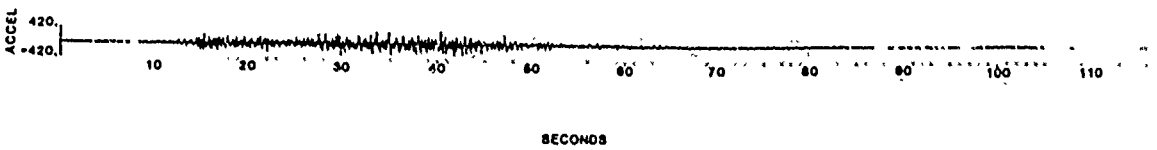
USGS OF 87-195

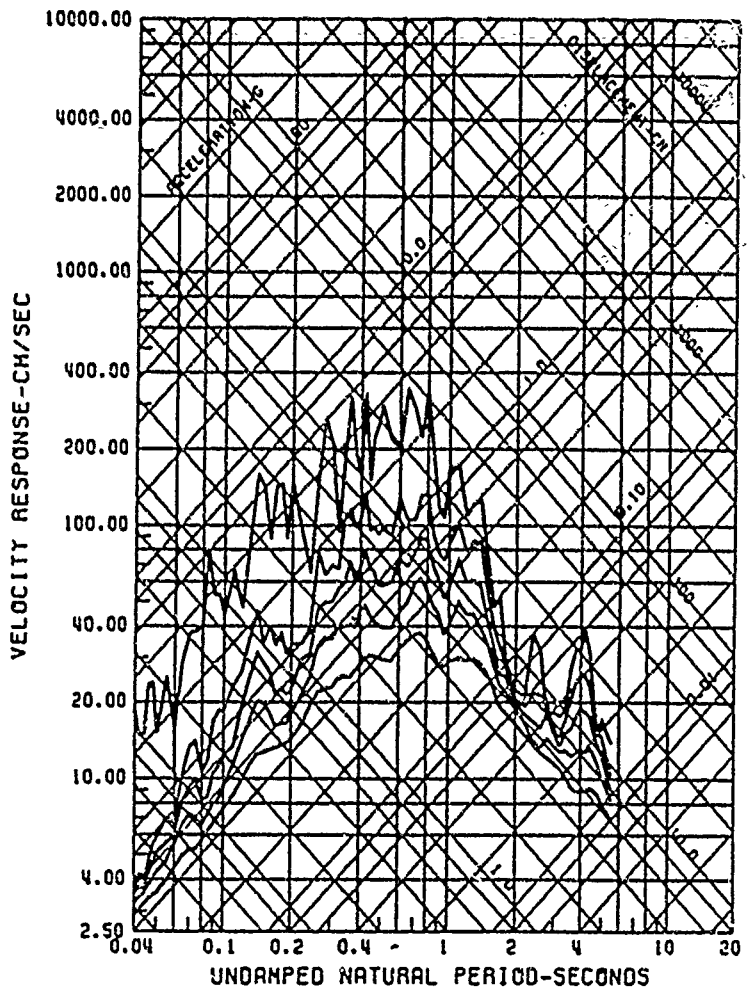
NATIONAL STRONG MOTION
DATA CENTER
07UTC 10
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ: ANTIALIAS 0 - 0 H
CRITICAL DAMPING
0,2,5,10,20 PERCENT

LLOLLEO, D.I.C.
3/03/85, 2247

CHL 11

UNCORRECTED ACCELEROGRAM
LLOLLEO, D.I.C
100 DEGREES, UP
EARTHQUAKE OF MARCH 3, 1985
PEAK VALUES (CM/SEC/SEC): 417.86





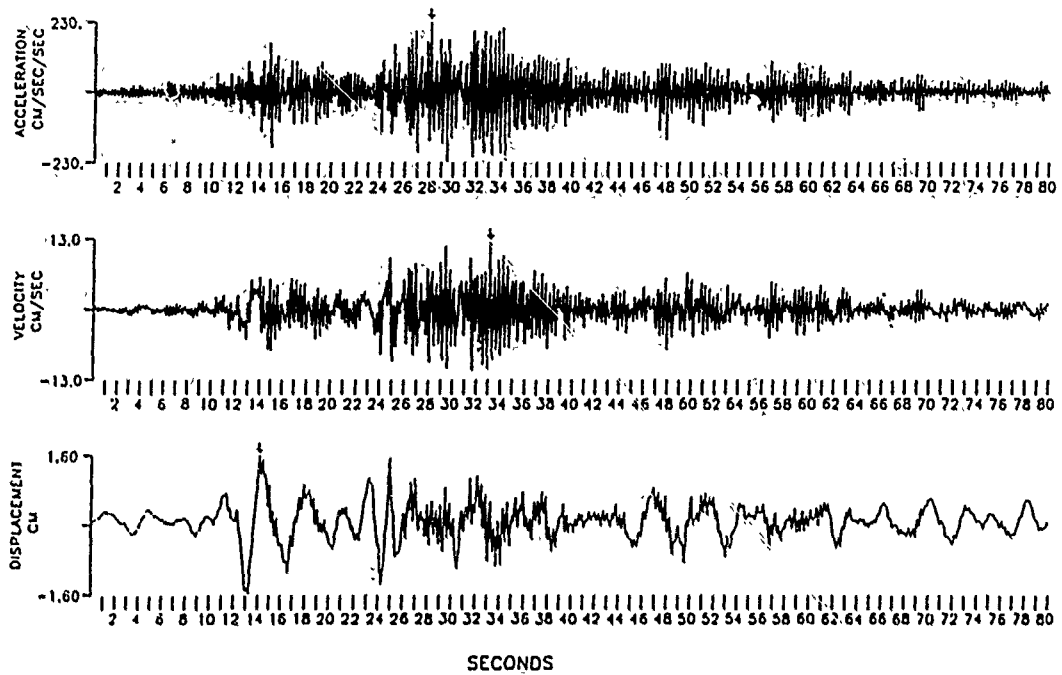
USGS OF 87-195

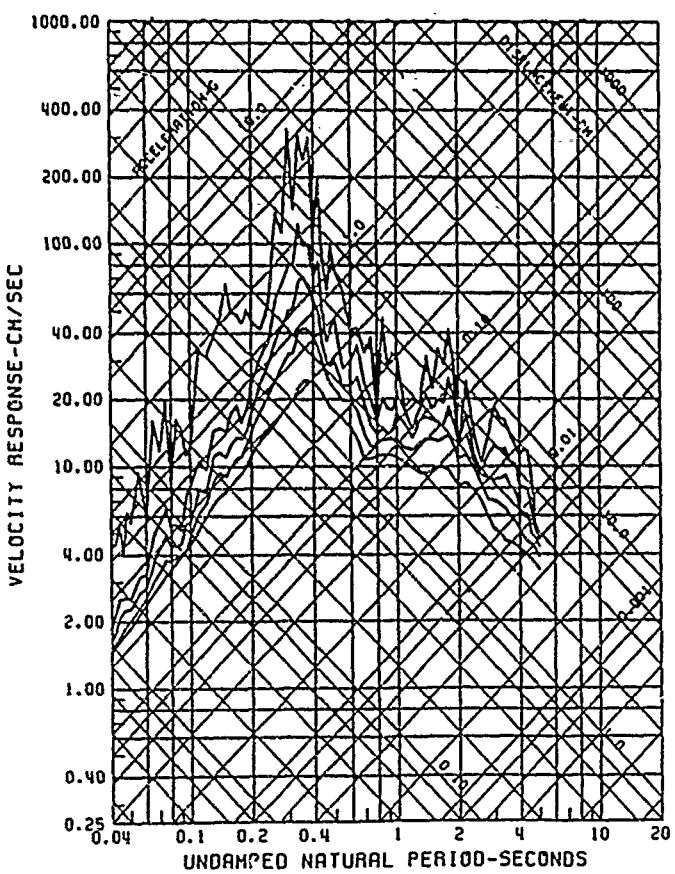
NATIONAL STRONG MOTION
DATA CENTER
07UTC 100
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ: ANTIALIAS 0 - 0 HZ
CRITICAL DAMPING
0.2,5,10,20 PERCENT

LLOLLEO, D.I.C,
3/03/85, 2247

CHL 12

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
PAPUDO
140 DEGREES
EARTHQUAKE OF MARCH 3, 1985
BUTTERWORTH FILTER AT 0.2 HZ, ORDER 4
PEAK VALUES: ACCEL=226.43 CM/SEC/SEC, VELOCITY=12.41 CM/SEC, DISPL=1.59 CM





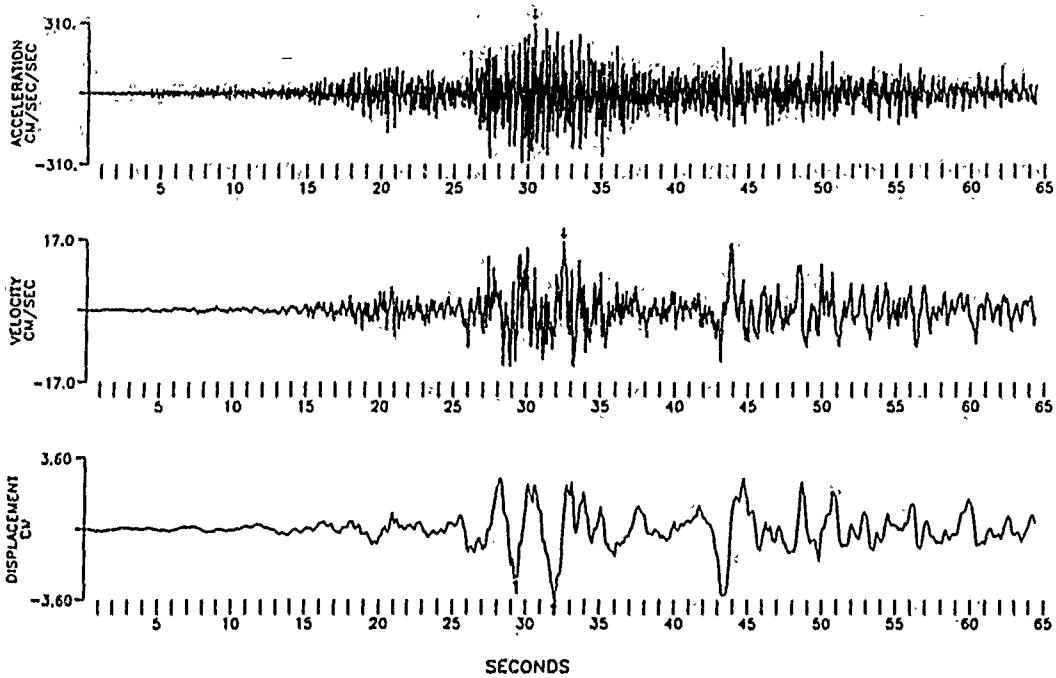
USGS OF 87-195

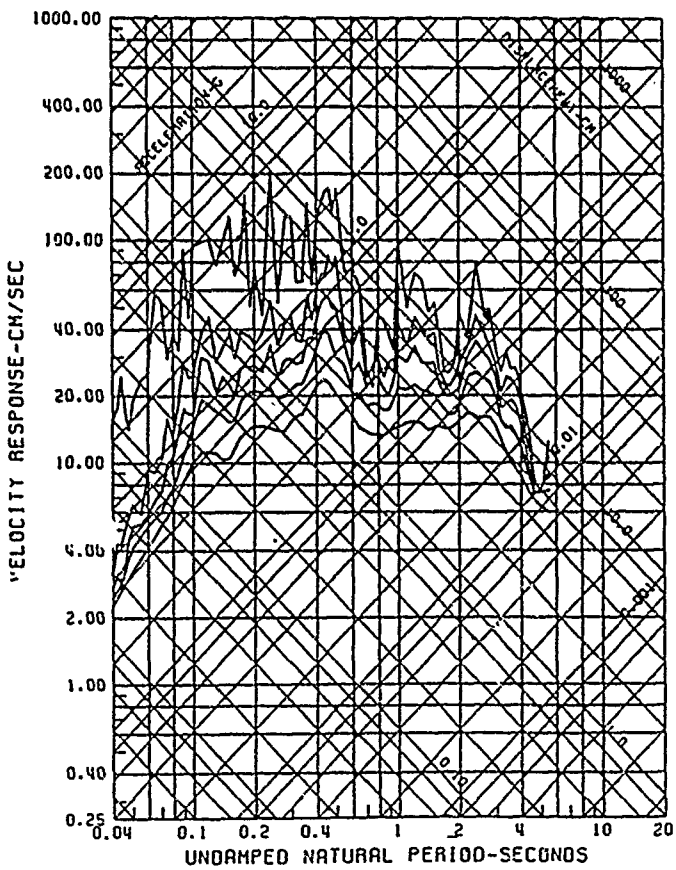
NATIONAL STRONG MOTION
DATA CENTER
140 DEGREES
FILTERS: BUTTERWORTH. ORDER 4
0.200 HZ: ANTIALIAS 50 - 100 H
CRITICAL DAMPING
0,2,5,10,20 PERCENT

PAPUDO, EARTHQUAKE
MARCH 3, 1985

CHL 16

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT AT 200. SPS
SAN FELIPE
170 DEGREES
EARTHQUAKE OF MARCH 3, 1985
BUTTERWORTH FILTER AT .167 HZ, ORDER 4
PEAK VALUES: ACCEL= 303.47 CM/SEC/SEC, VELOCITY= 16.17 CM/SEC, DISPL= -3.58 CM





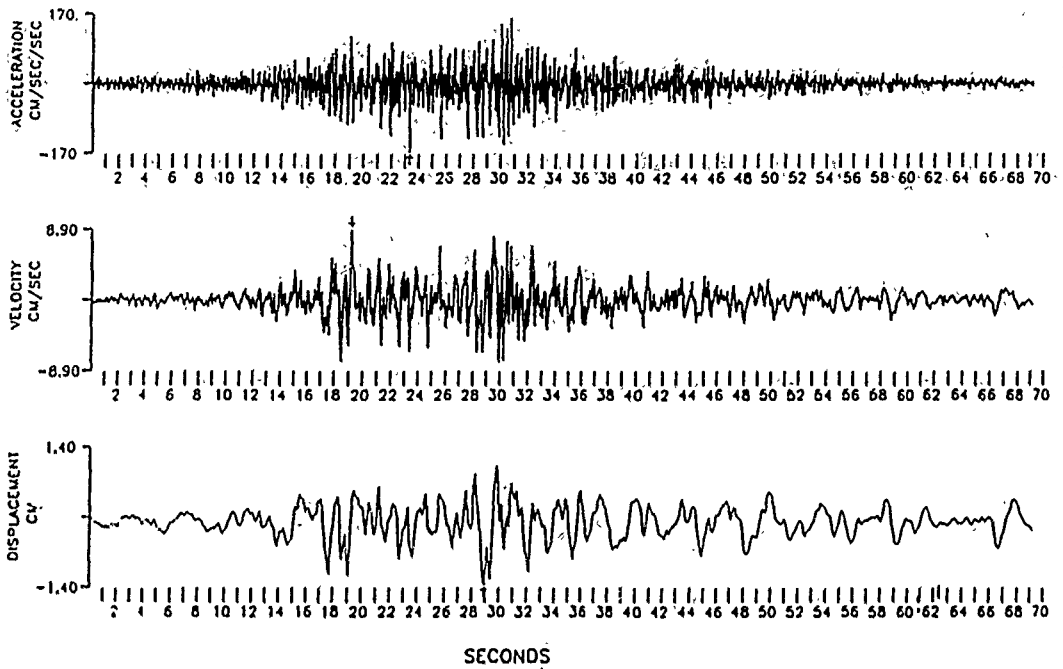
USGS OF 87-195

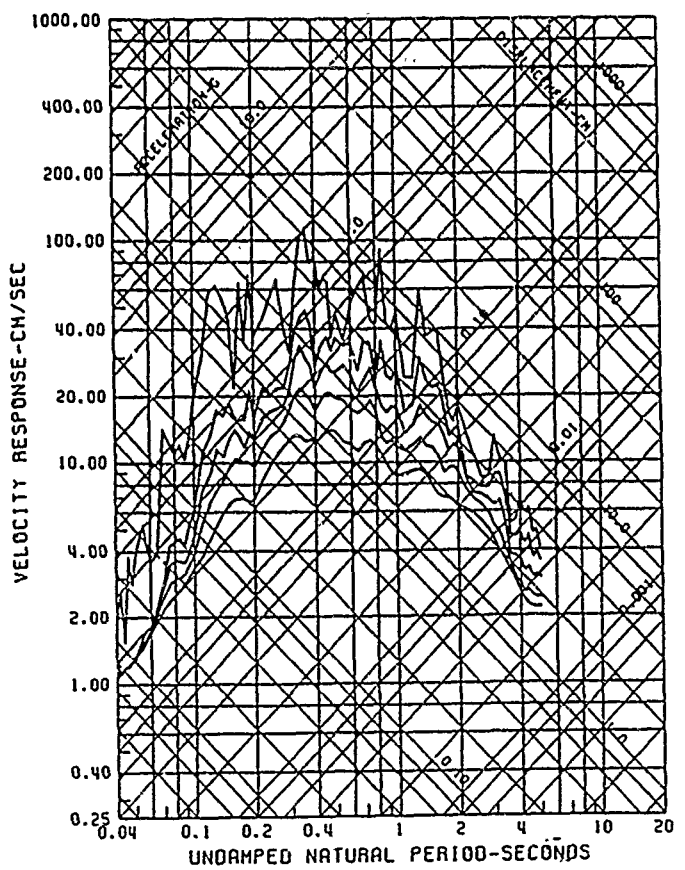
NATIONAL STRONG MOTION
DATA CENTER
170 DEGREES
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

SAN FELIPE, EARTHQUAKE
MARCH 3, 1985

CHL 24

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
TALCA
010 DEGREES
EARTHQUAKE OF MARCH 3, 1985
BUTTERWORTH FILTER AT 0.2 HZ, ORDER 4
PEAK VALUES: ACCEL=-167.90 CM/SEC/SEC, VELOCITY=8.89 CM/SEC, DISPL=-1.36 CM





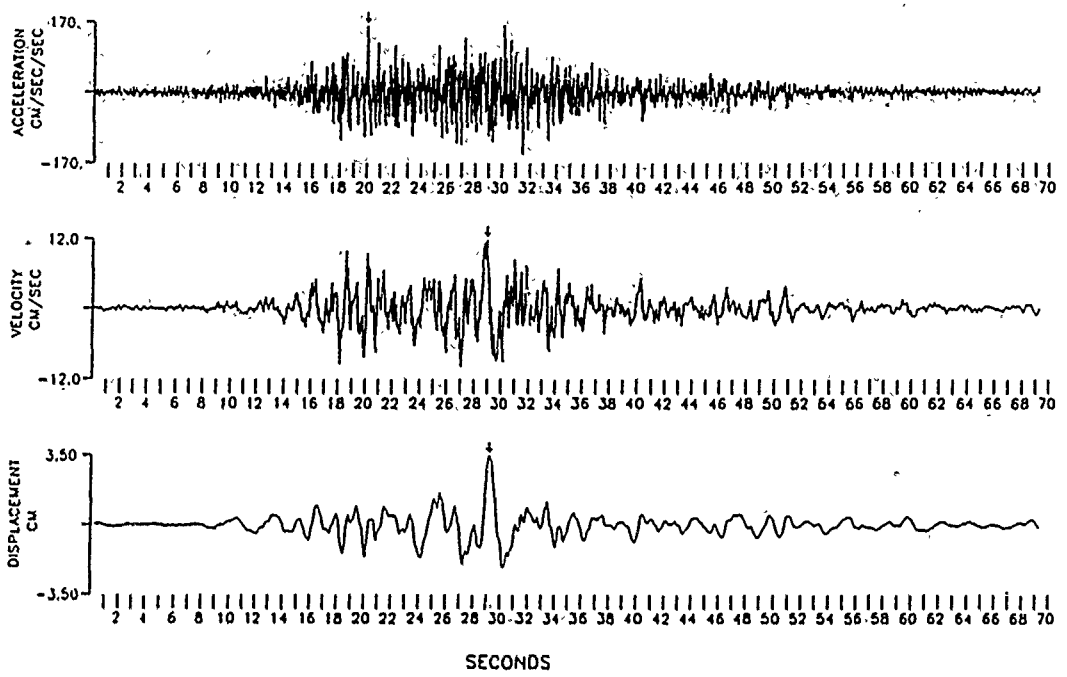
USGS OF 87-195

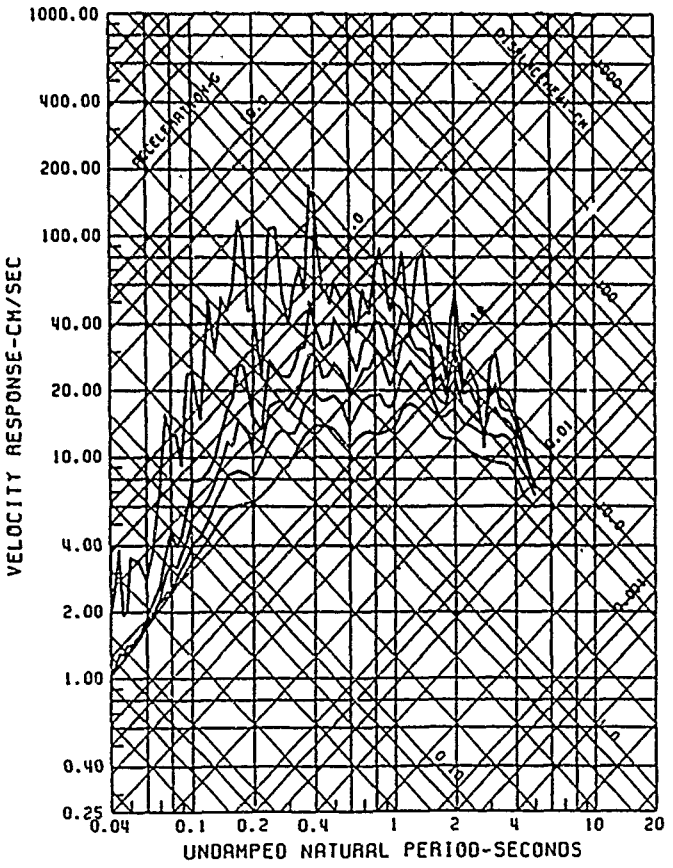
NATIONAL STRONG MOTION
DATA CENTER
010 DEG
FILTERS: BUTTERWORTH, ORDER 4
0.200 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

TALCA, EARTHQUAKE
MARCH 3, 1985

CHL 29

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
TALCA
280 DEGREES
EARTHQUAKE OF MARCH 3, 1985
BUTTERWORTH FILTER AT 0.2 HZ, ORDER 4
PEAK VALUES: ACCEL=163.95 CM/SEC/SEC, VELOCITY=11.86 CM/SEC, DISPL=3.47 CM





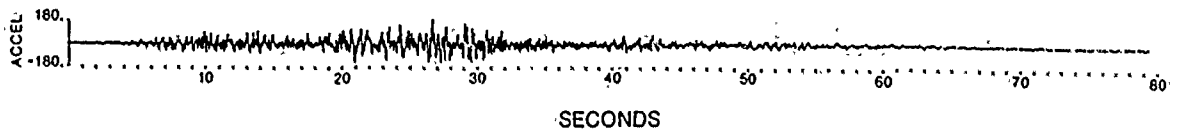
USGS OF 87-195

NATIONAL STRONG MOTION
DATA CENTER
280 DEG
FILTERS: BUTTERWORTH, ORDER 4
0.200 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0, 2, 5, 10, 20 PERCENT

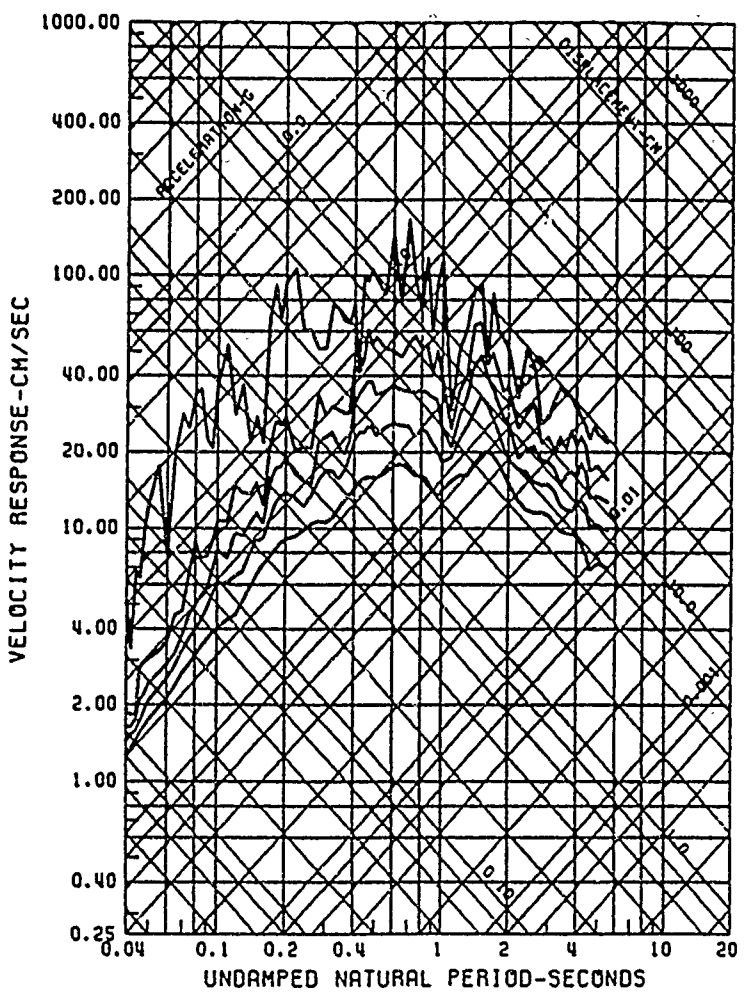
TALCA, EARTHQUAKE
MARCH 3, 1985

CHL 30

UNCORRECTED ACCELEROGRAM
VALPARAISO, U.F.S.M, D.I.C
070 DEGREES
EARTHQUAKE OF MARCH 3, 1985
PEAK VALUES (CM/SEC/SEC): 175.54



SECONDS



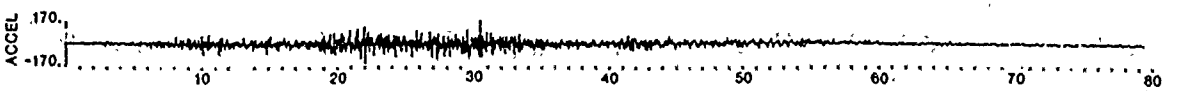
USGS OF 87-195

NATIONAL STRONG MOTION
DATA CENTER
2247:07UTC 70
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ: ANTIALIAS 0 - 0 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

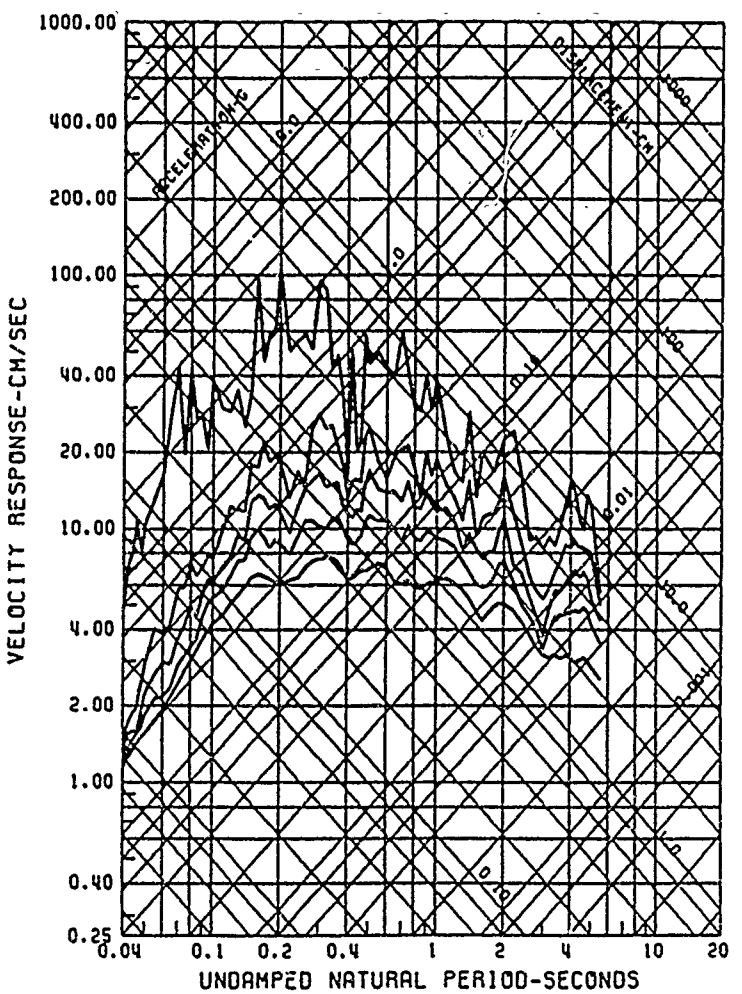
VALPARAISO, U.F.S.M,
D.I.C, 3/03/85

CHL 31

UNCORRECTED ACCELEROGRAM
VALPARAISO, U.F.S.M, D.I.C
160 DEGREES, UP
EARTHQUAKE OF MARCH 3, 1985
PEAK VALUES (CM/SEC/SEC): 161.22



SECONDS



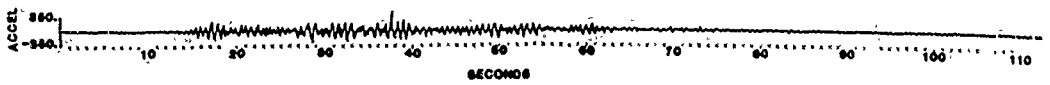
USGS OF 87-195

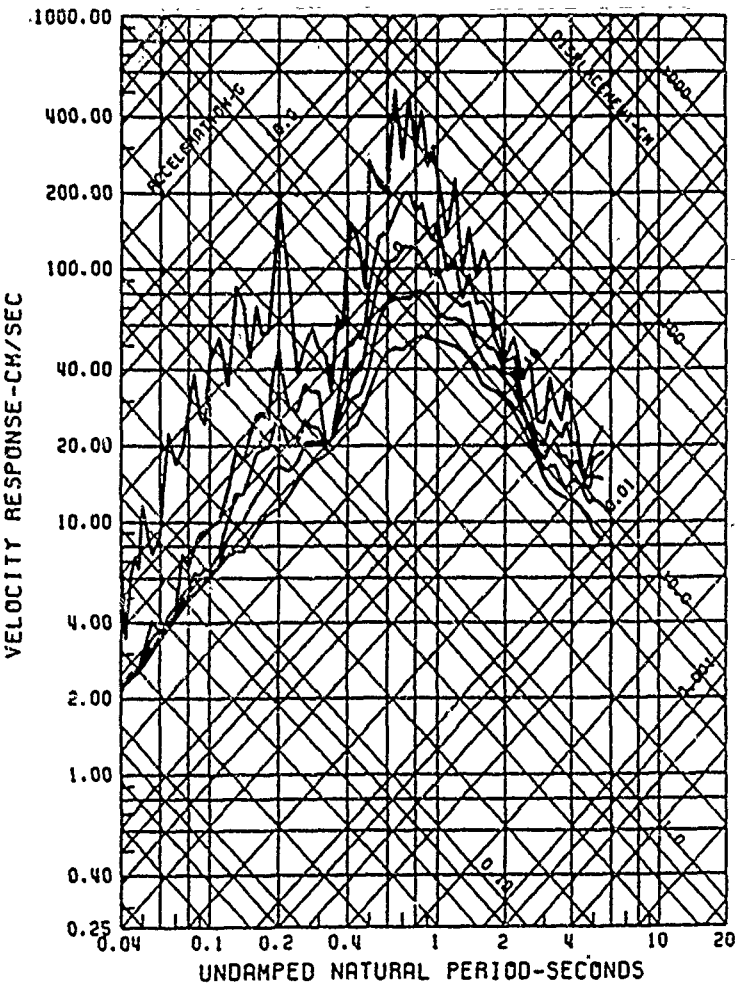
NATIONAL STRONG MOTION
DATA CENTER
2247:07UTC 70
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ; ANTIALIAS 0 - 0 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

VALPARAISO, U.F.S.M,
D.I.C, 3/03/85

CHL 32

UNCORRECTED ACCELEROGRAM
VINA DEL MAR, D.I.C
200 DEGREES
EARTHQUAKE OF MARCH 3, 1985
PEAK VALUES (CM/SEC/SEC): 349.51





USGS OF 87-195

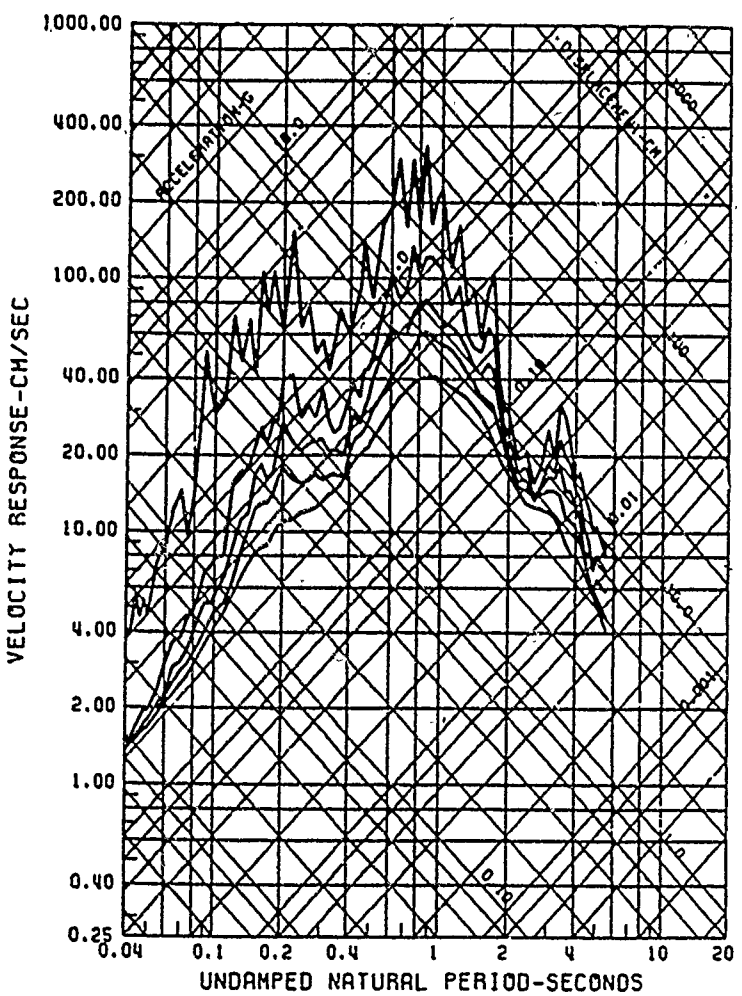
NATIONAL STRONG MOTION
DATA CENTER
07UTC 200
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ; ANTIALIAS 0 - 0 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

VINA DEL MAR, D.I.C.
3/03/85, 2247

CHL 35

UNCORRECTED ACCELEROGRAM
VINA DEL MAR, D.I.C
290 DEGREES,
EARTHQUAKE OF MARCH 3, 1985
PEAK VALUES (CM/SEC/SEC): -223.69





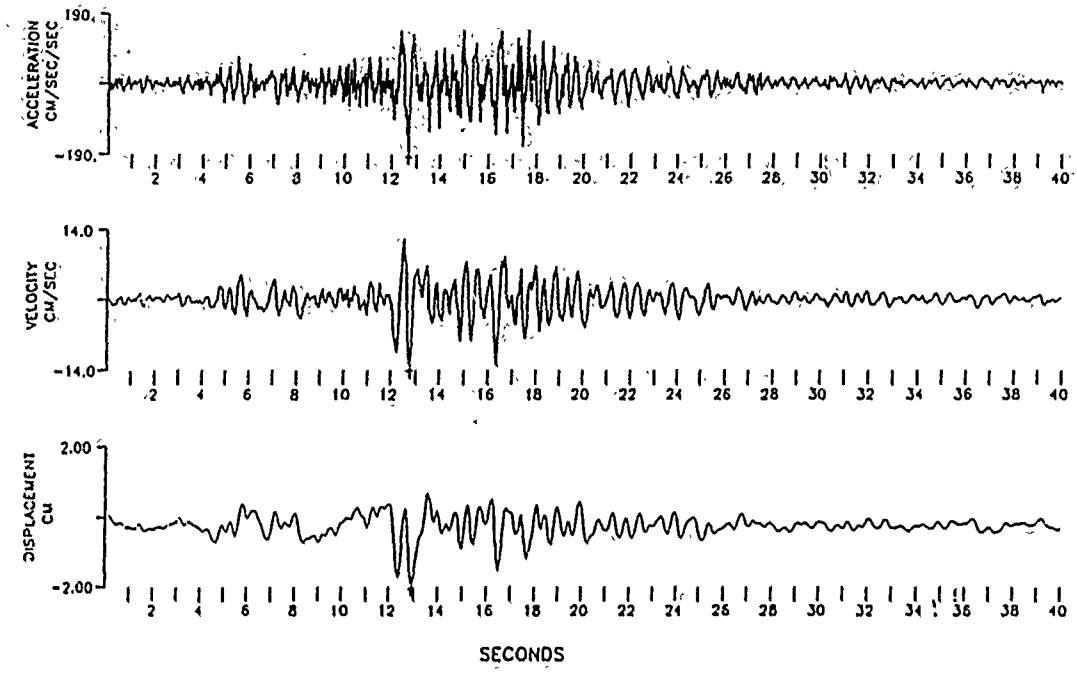
USGS OF 87-195

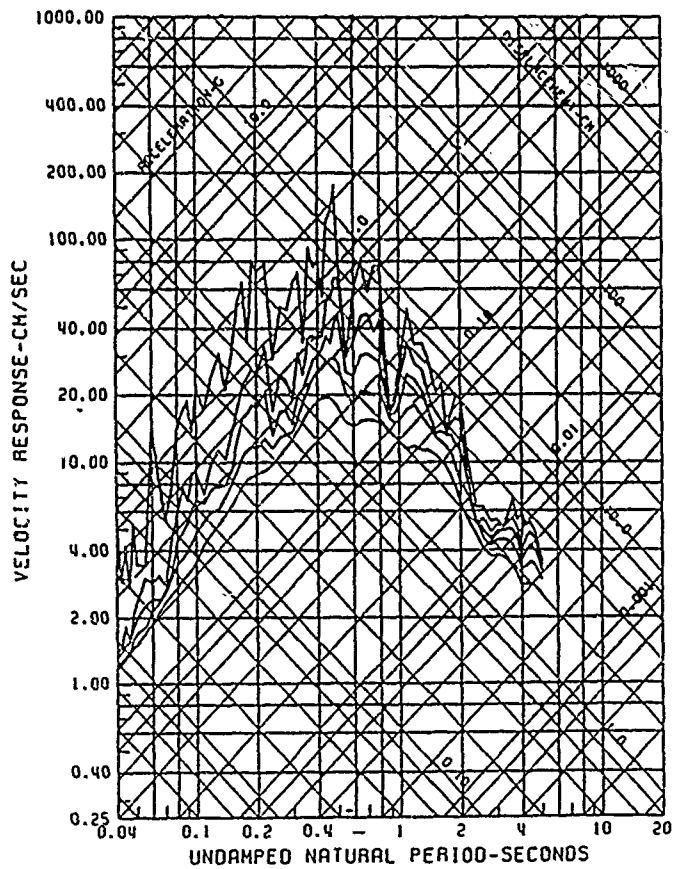
NATIONAL STRONG MOTION
DATA CENTER
07UTC 290
FILTERS: BUTTERWORTH, ORDER 4
0.167 HZ; ANTIALIAS 0 - 0 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

VINA DEL MAR, D.I.C,
3/03/85, 2247

CHL 36

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
LLOLLEO
100 DEGREES
EARTHQUAKE OF MARCH 3, 1985, FIRST AFTERSHOCK (1 HOUR)
BUTTERWORTH FILTER AT 0.20 HZ, ORDER 4
PEAK VALUES: ACCEL=-186.90 CM/SEC/SEC, VELOCITY=-13.39 CM/SEC, DISPL=-1.96 CM





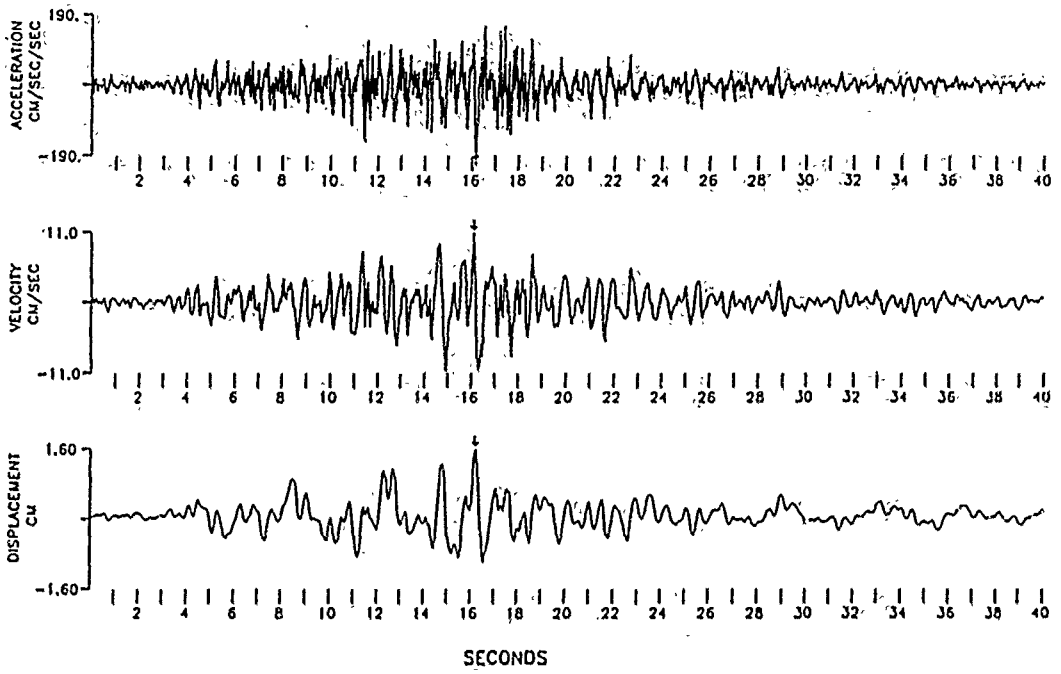
USGS OF 87-195

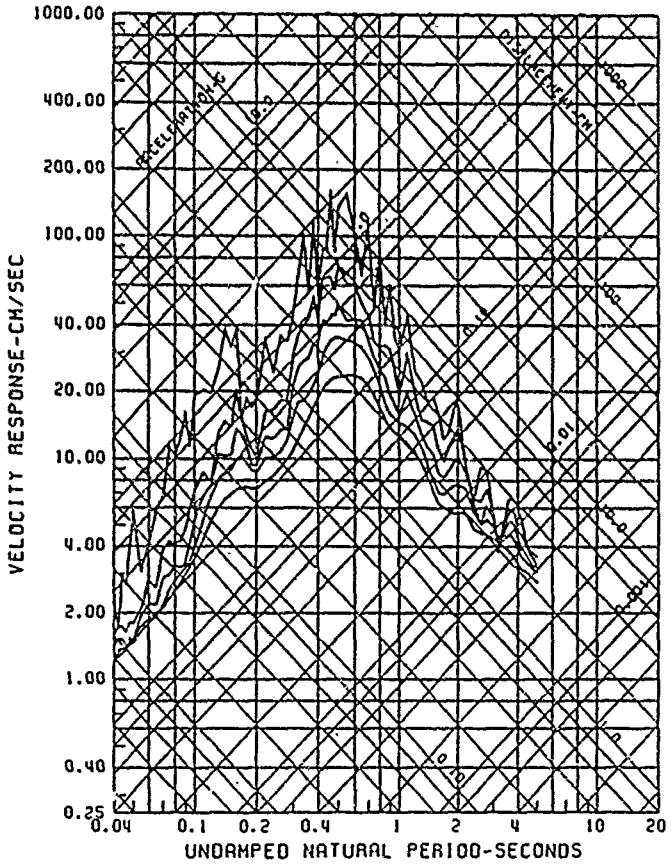
NATIONAL STRONG MOTION DATA CENTER
FIRST AFTERSHOCK (1 HOUR), 010
FILTERS: BUTTERWORTH, ORDER 4
0.200 HZ: ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0, 2, 5, 10, 20 PERCENT

LLOLLEO, EARTHQUAKE
MARCH 3, 1985

CHL 39

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
LLOLLEO
10 DEGREES
EARTHQUAKE OF MARCH 3, 1985, FIRST AFTERSHOCK (1 HOUR)
BUTTERWORTH FILTER AT 0.20 HZ, ORDER 4
PEAK VALUES: ACCEL=-182.38 CM/SEC/SEC, VELOCITY=10.88 CM/SEC, DISPL=1.59 CM



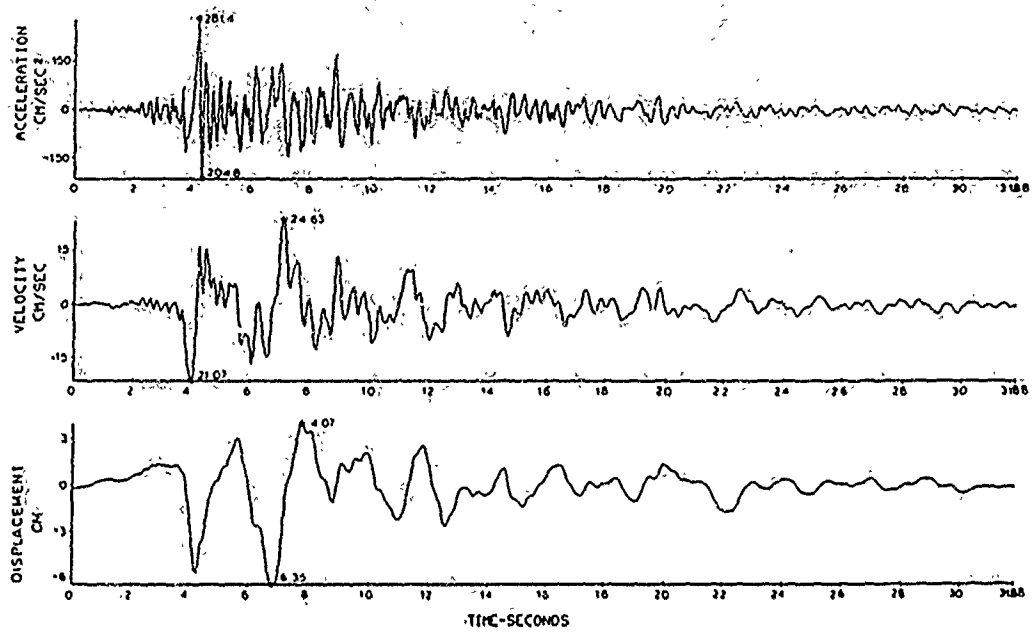


USGS OF 87-195

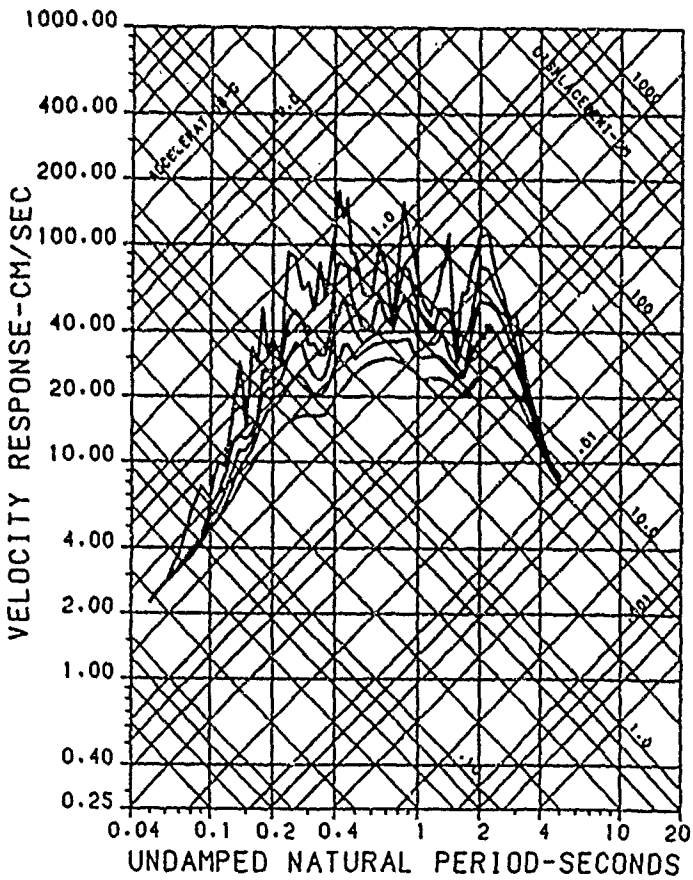
NATIONAL STRONG MOTION
DATA CENTER
FIRST AFTERSHOCK (1 HOUR), 10(
FILTERS: BUTTERWORTH, ORDER 4
0.200 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0, 2, 5, 10, 20 PERCENT

LLOLLEO, EARTHQUAKE
MARCH 3, 1985

CHL 40



N 55 W



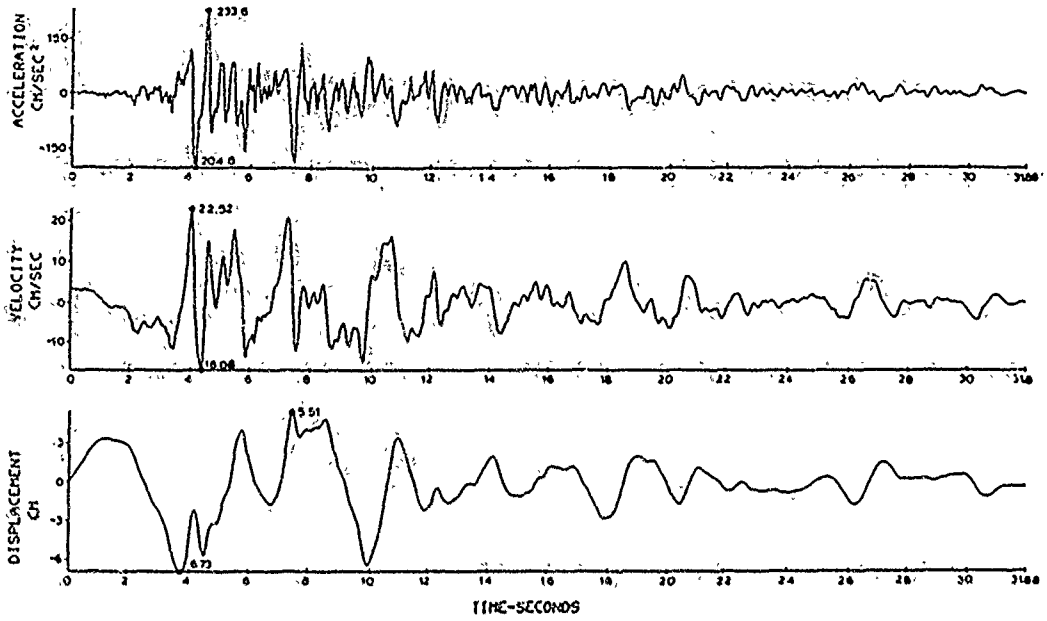
EERI Recon Rpt

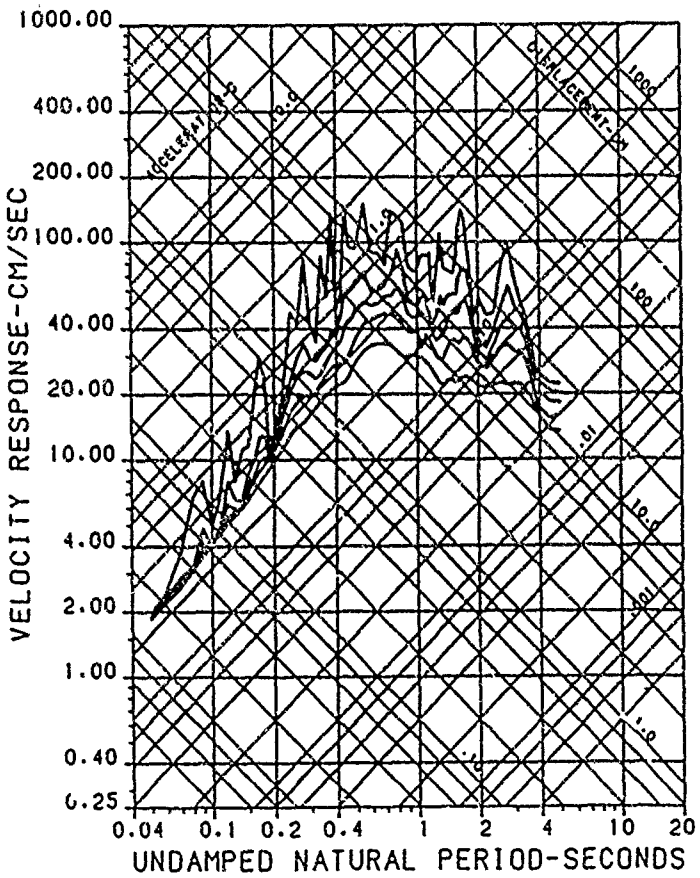
N 55 W

Corinth.
February 24, 1981

GRE 7

EERI REcon Rpt "Central Greece of Feb-Mar 1981 N35E



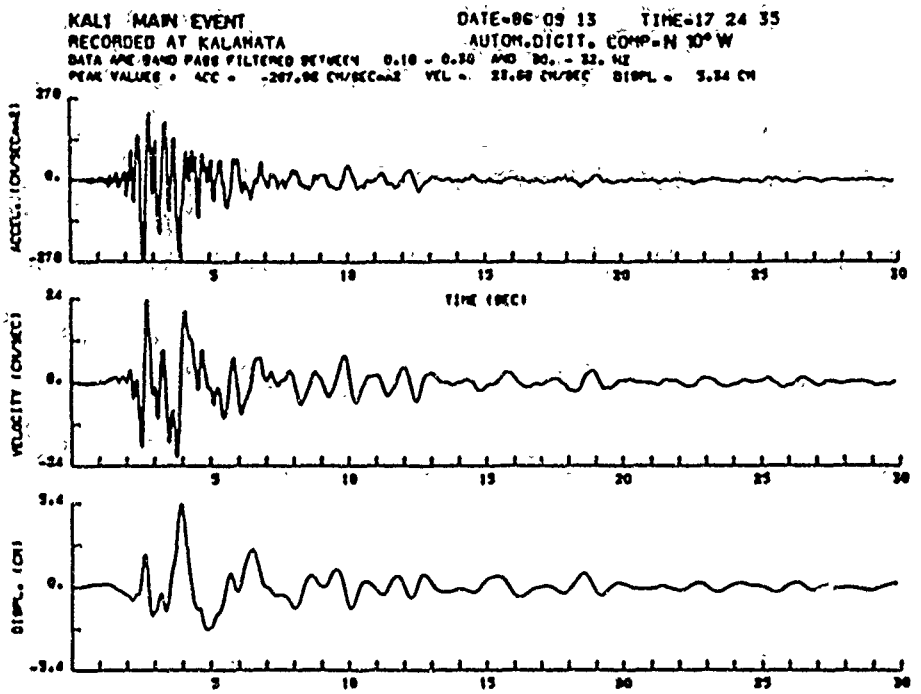


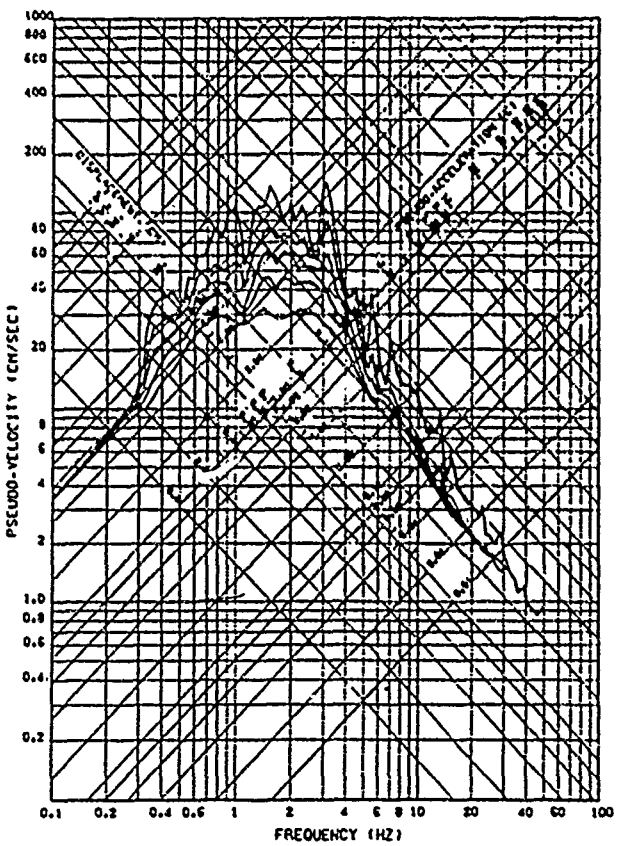
EERL RECON RPT

CENTRAL GREECE DOES
N35E
OF FEB-MAR 1981

February 24, 1981, Corinth

GRE 8





EERL EQK SPECTRA 3:2

KALI MAIN EVENT

AUTOM.DIGIT. COMP=N 10° W

CORRECTED PEAK ACCELERATION · -0.273 G

BAND PASS FILTERED BETWEEN

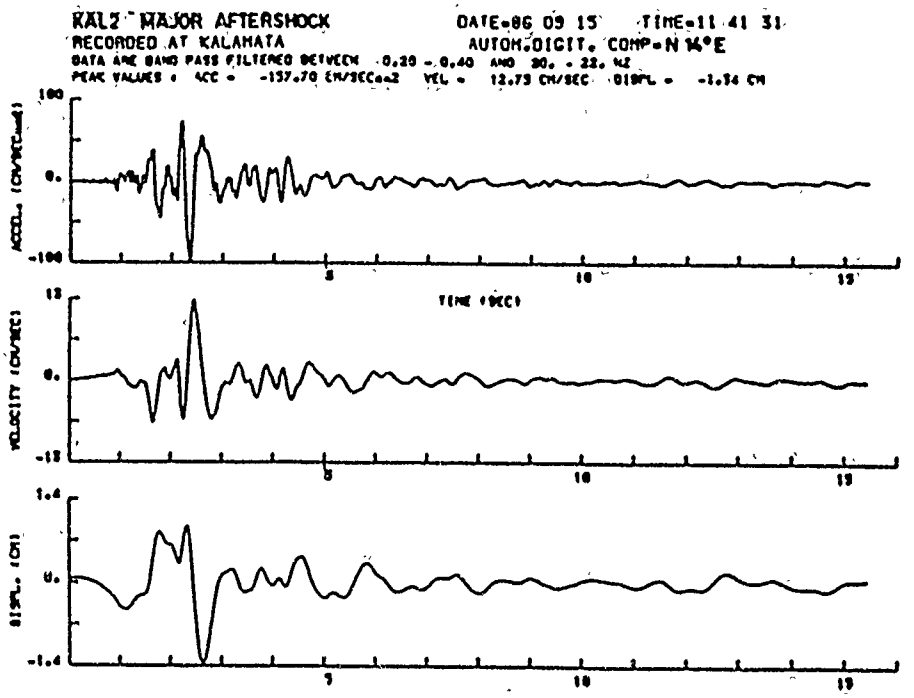
0.10 0.30 AND 30. - 32. HZ

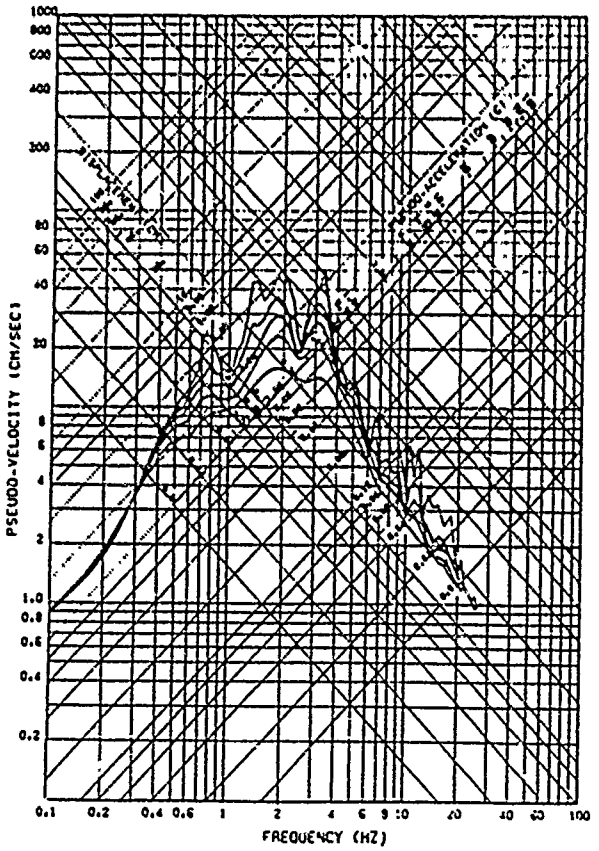
0% 2% 5% 10% 20% DAMPING

RECORDED AT KALAMATA

DATE=86 09 13 TIME=17 24 35

GRE 9



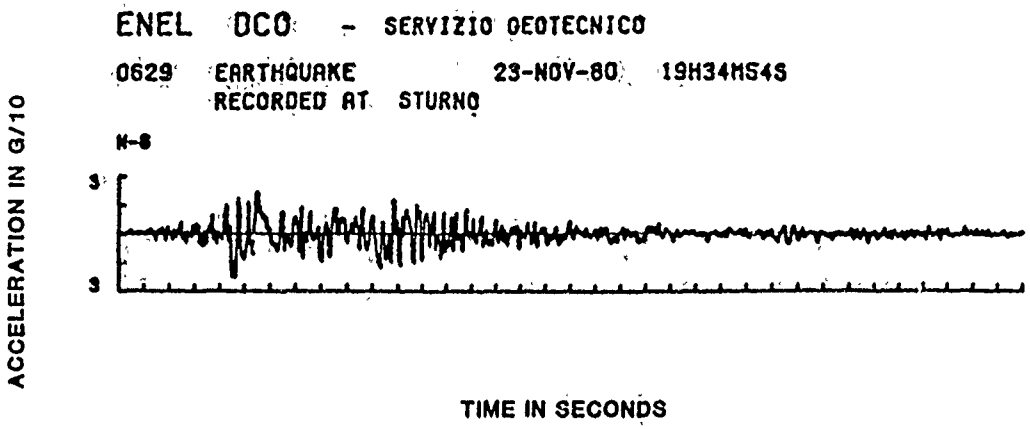


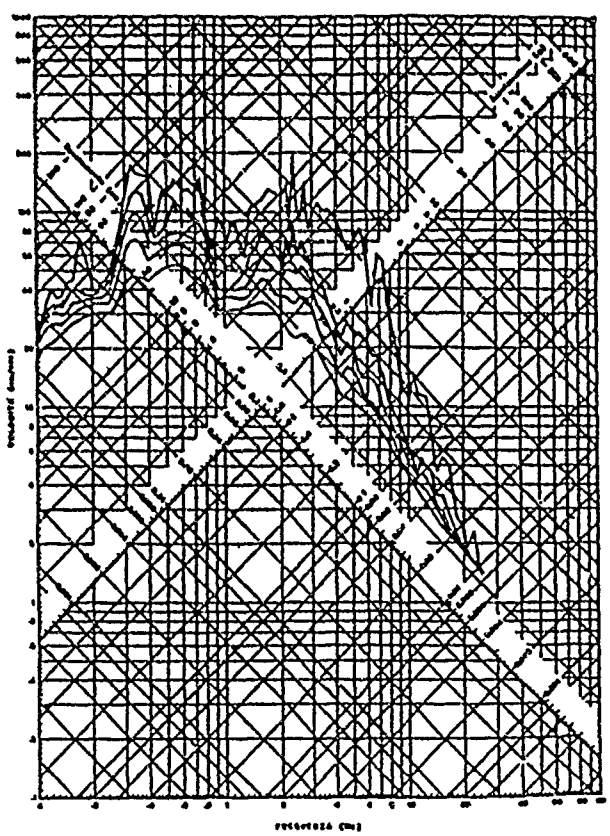
EERL EQK SPECTRA 3:2

KAL2 MAJOR AFTERSHOCK
AUTOM.DIGIT. COMP=N 14°E
CORRECTED PEAK ACCELERATION = -0.161 G
BAND PASS FILTERED BETWEEN
0.20 0.40 AND 20. - 22. HZ
0% 2% 5% 10% 20% DAMPING

RECORDED AT KALAMATA
DATE=86 09 15 TIME=11 41 31

GRE 14





BERARDI ET AL 1981

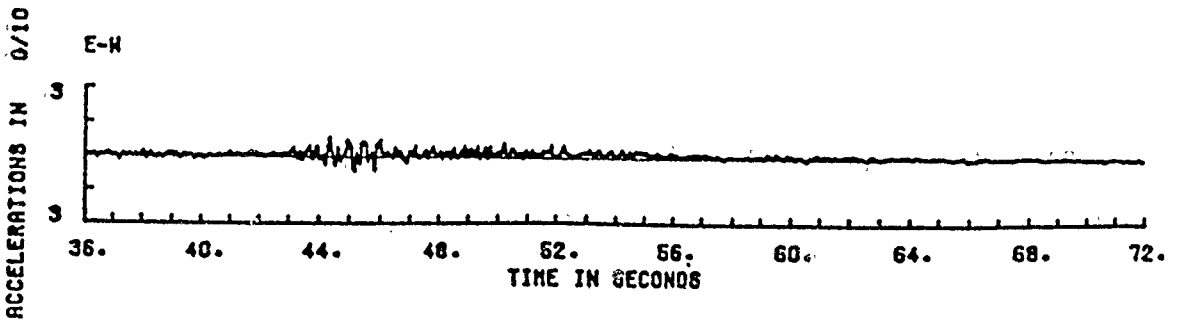
ENEL DCO-SERVIZIO GEOTECNICO
DAMPING VALUES 0 PERCENT
19H34M54S 2 PERCENT
COMP. NS 5 PERCENT
10 PERCENT
20 PERCENT
0629 EARTHQUAKE

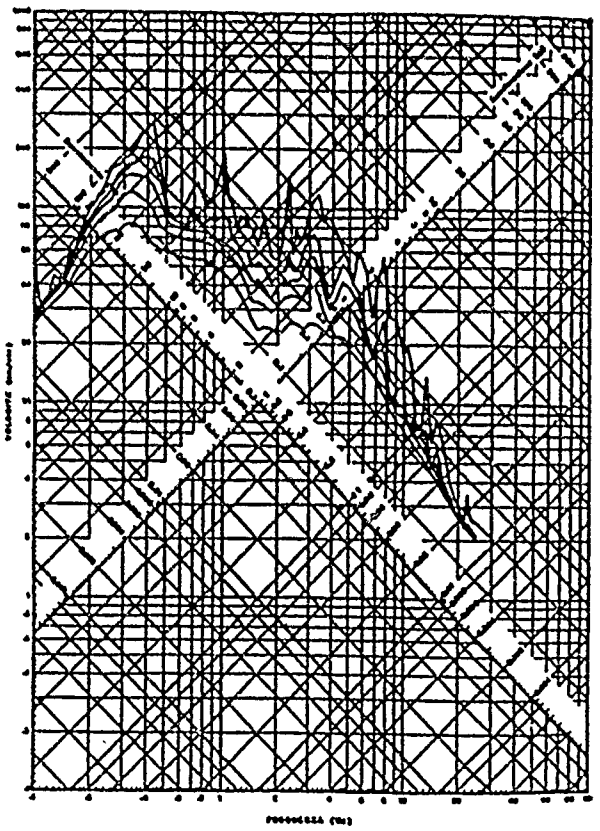
RECORDED AT STURNO
23-NOV-80

ITA 20

ENEL DCO - SERVIZIO GEOTECNICO

0629 EARTHQUAKE 23-NOV-80 19H34M54S
RECORDED AT STURNO



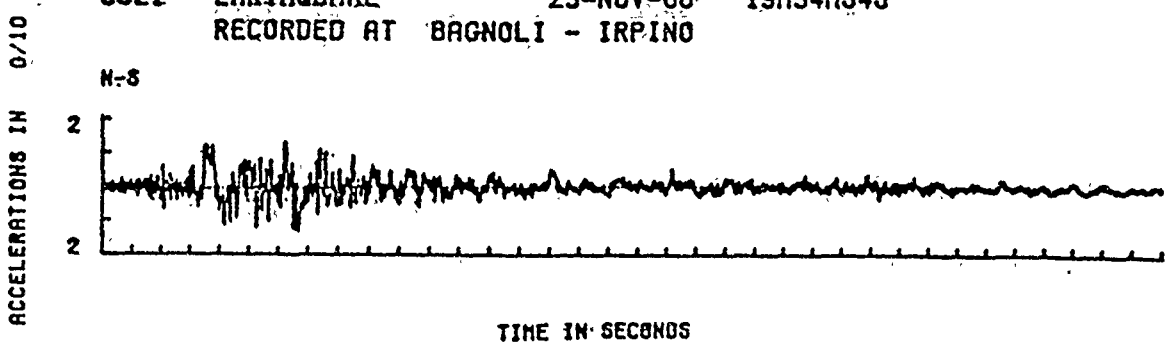


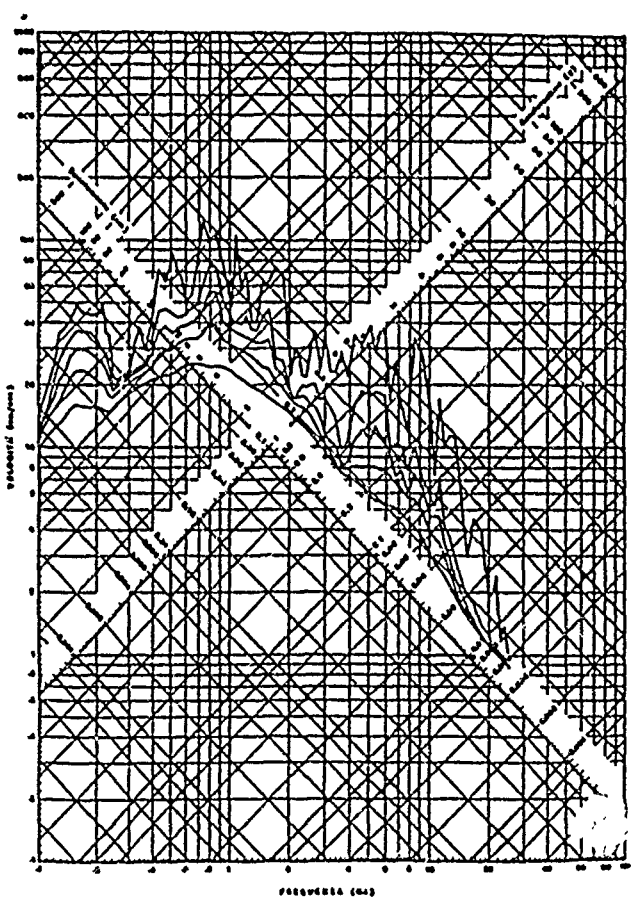
BERARDI ET AL 1981

ENEL DCO-SERVIZIO GEOTECNICO
DAMPING VALUES 0 PERCENT
19H34M54S 2 PERCENT
COMP. EW 5 PERCENT
10 PERCENT
20 PERCENT
0629 EARTHQUAKE

RECORDED AT STURNO
23-NOV-80

ITA 21





BERARDI ET AL 1981

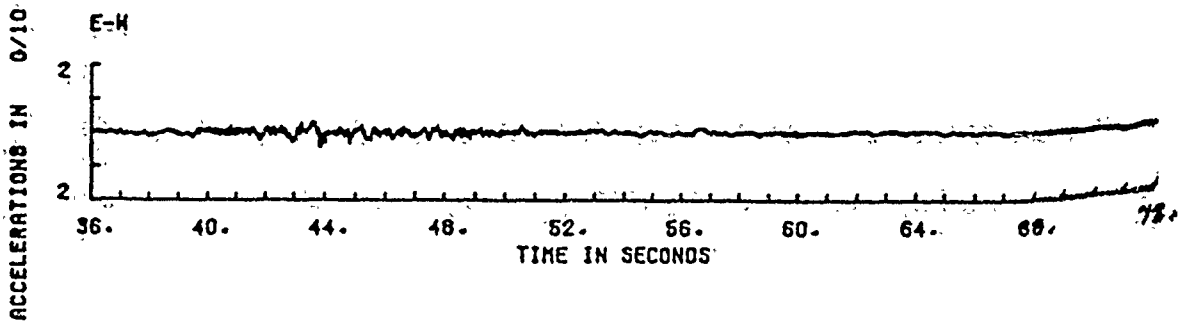
ENEL DCO-SERVIZIO GEOTECNICO
DAMPING VALUES 0 PERCENT
2 PERCENT
5 PERCENT
19H34M54S 10 PERCENT
COMP. NS 20 PERCENT
0621 EARTHQUAKE

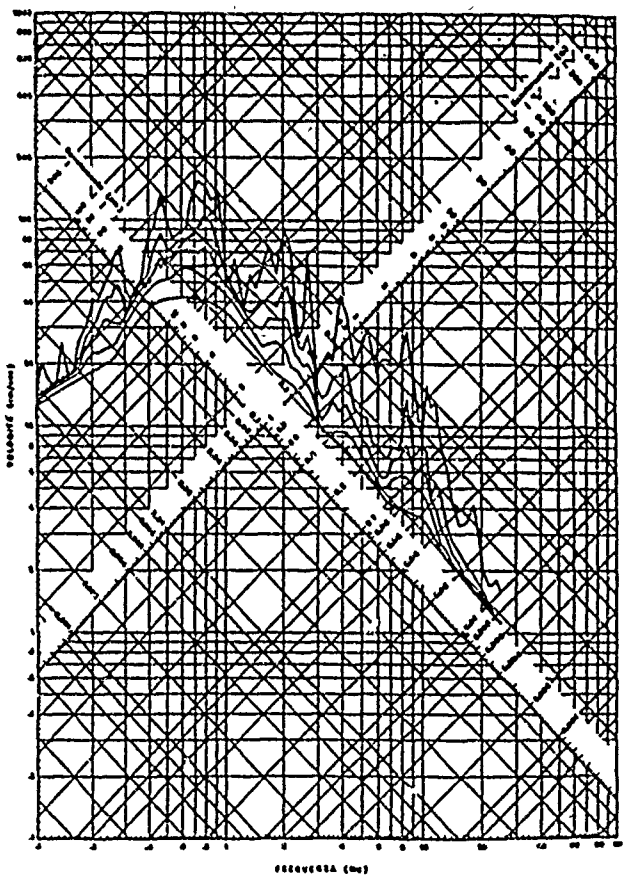
RECORDED AT BAGNOLI - IRPINO
23-NOV-80

ITA 22

ENEL DCO - SERVIZIO GEOTECNICO

0621 EARTHQUAKE 23-NOV-80 19H34M54S
RECORDED AT BAGNOLI - IRPINO





BERARDI ET AL 1981

ENEL DCO-SERVIZIO GEOTECNICO
DAMPING VALUES 0 PERCENT
2 PERCENT
5 PERCENT
10 PERCENT
20 PERCENT
19H34M54S
COMP. E-W.
0621 EARTHQUAKE

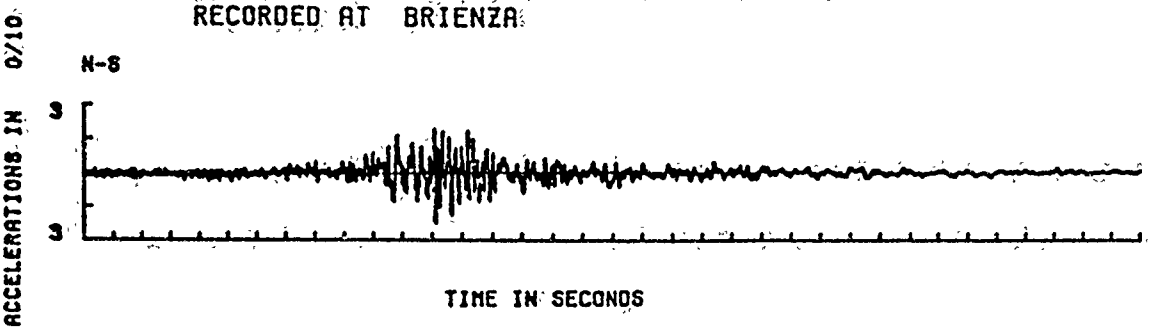
RECORDED AT BAGNOLI - IRPINO
23-NOV-80

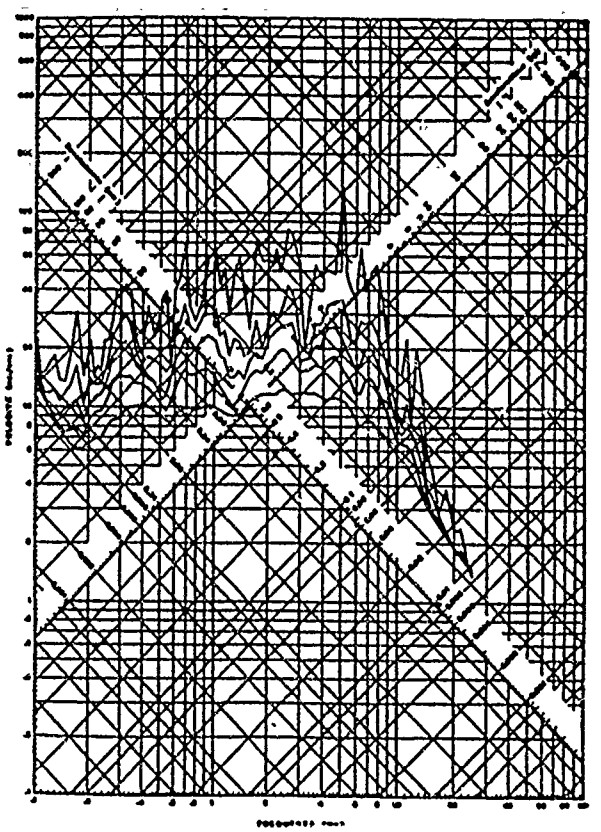
ITA 23

ENEL DCO - SERVIZIO GEOTECNICO

0624 EARTHQUAKE 23-NOV-80 19H34M54S
RECORDED AT BRIENZA

N-S





BERARDI ET AL 1981

ENEL DCO-SERVIZIO GEOTECNICO

DAMPING VALUES 0 PERCENT
2 PERCENT
5 PERCENT
10 PERCENT
20 PERCENT
19H34M54S
COMP. NS

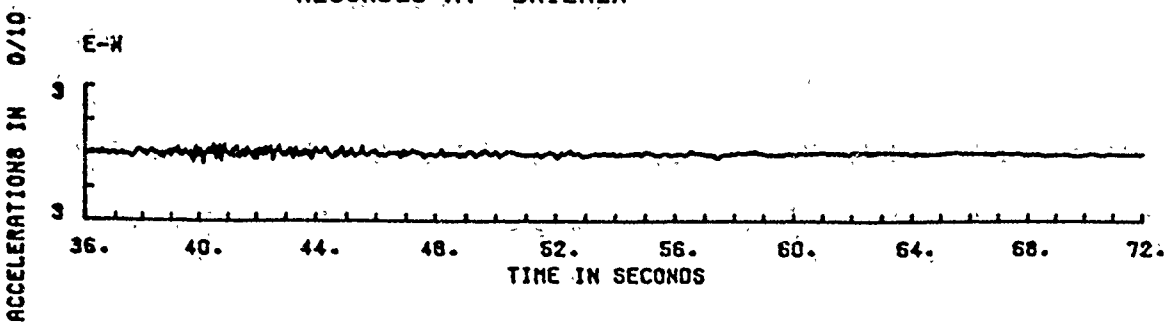
0624 EARTHQUAKE

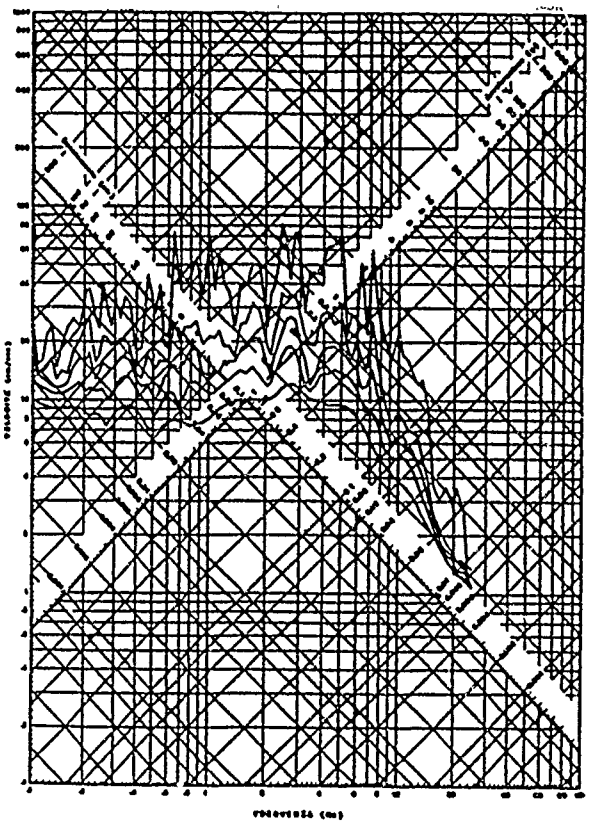
RECORDED AT BRIENZA
23-NOV-80

ITA 24

ENEL DCO - SERVIZIO GEOTECNICO

0624 EARTHQUAKE 23-NOV-80 19H34M54S
RECORDED AT BRIENZA





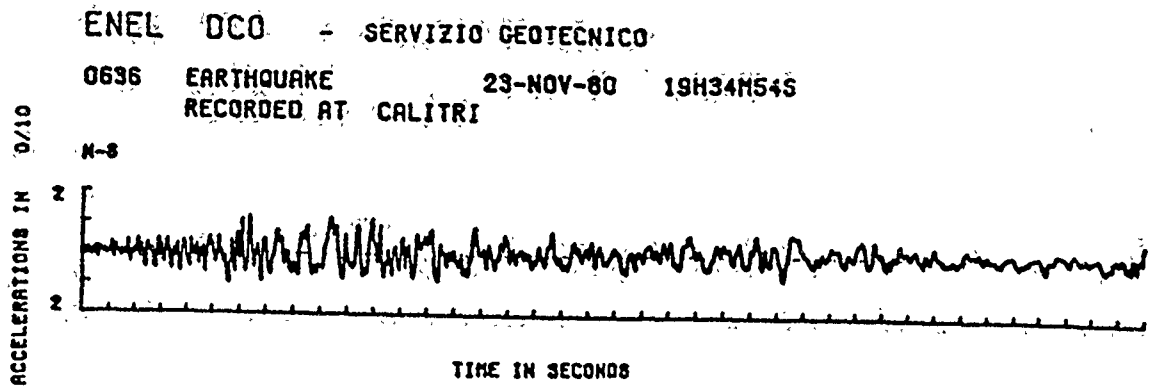
BERARDI ET AL 1984

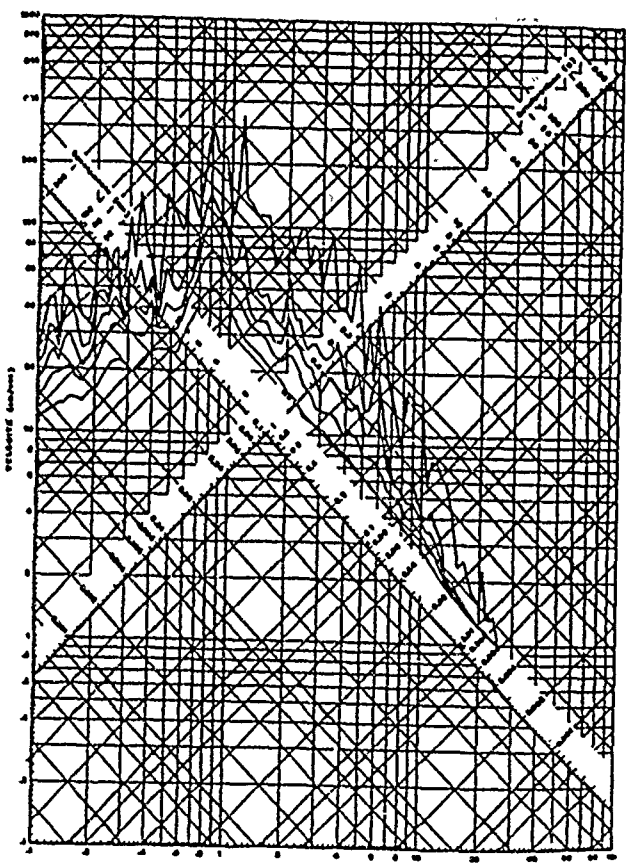
ENEL - DCO - SERVIZIO GEOTECNICO

DAMPING VALUES 0 PERCENT
2 PERCENT
5 PERCENT
10 PERCENT
20 PERCENT
19H34M54S
COMP. EW
0624 EARTHQUAKE

RECORDED AT BRIENZA
23-NOV-80

ITA 25





BERARDI ET AL 1981

ENEL DCO-SERVIZIO GEOTECNICO

DAMPING VALUES 0 PERCENT
2 PERCENT
5 PERCENT
10 PERCENT
20 PERCENT

19H34M54S

COMP. NS

0636 EARTHQUAKE

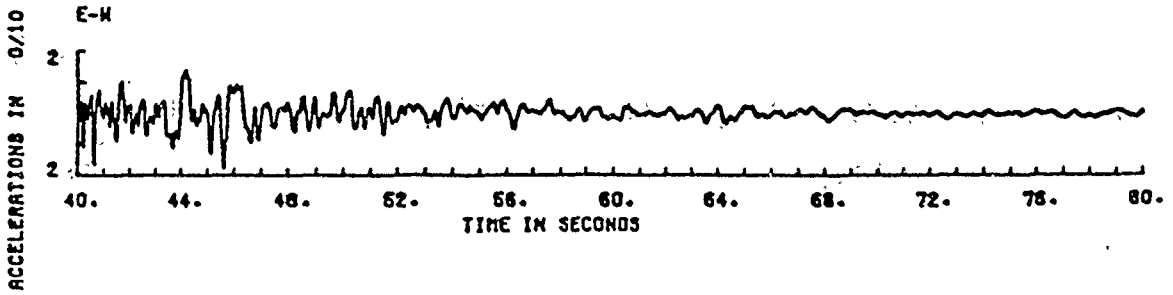
RECORDED AT CALITRI

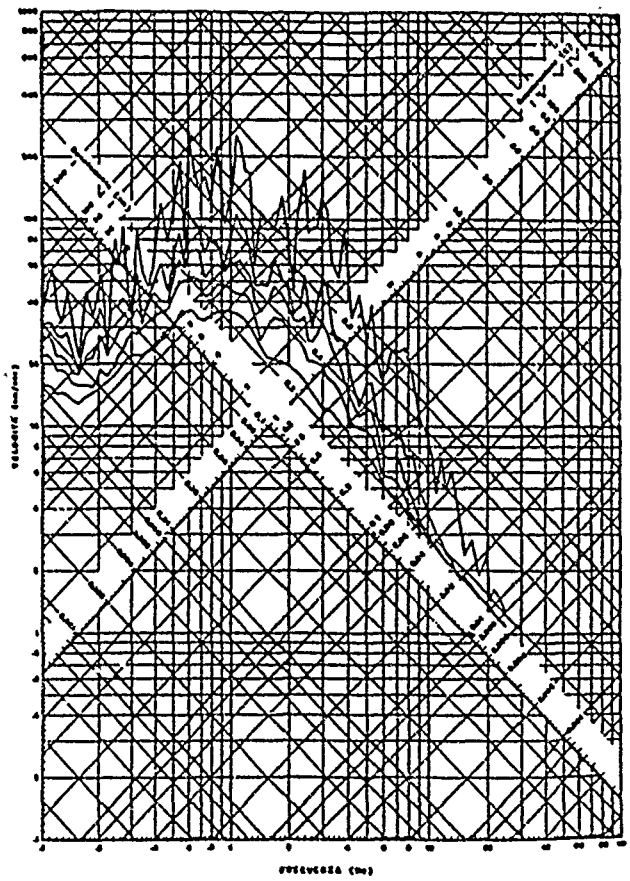
23-NOV-80

ITA 26

ENEL DCO - SERVIZIO GEOTECNICO

0636 EARTHQUAKE 23-NOV-80 19H34M54S
RECORDED AT CALITRI





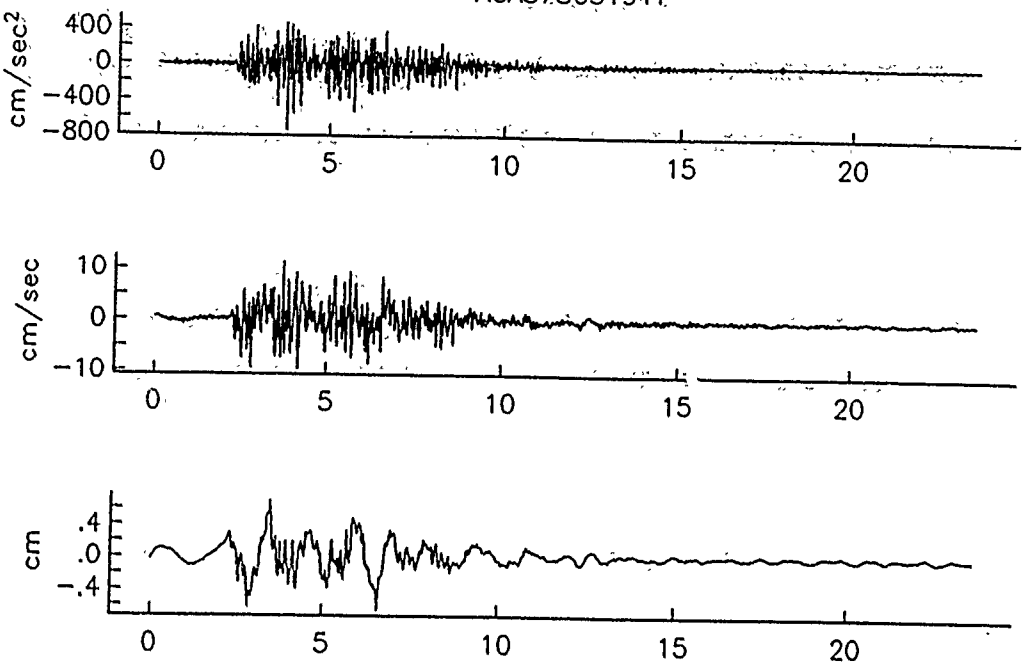
BERARDI ET AL 1981

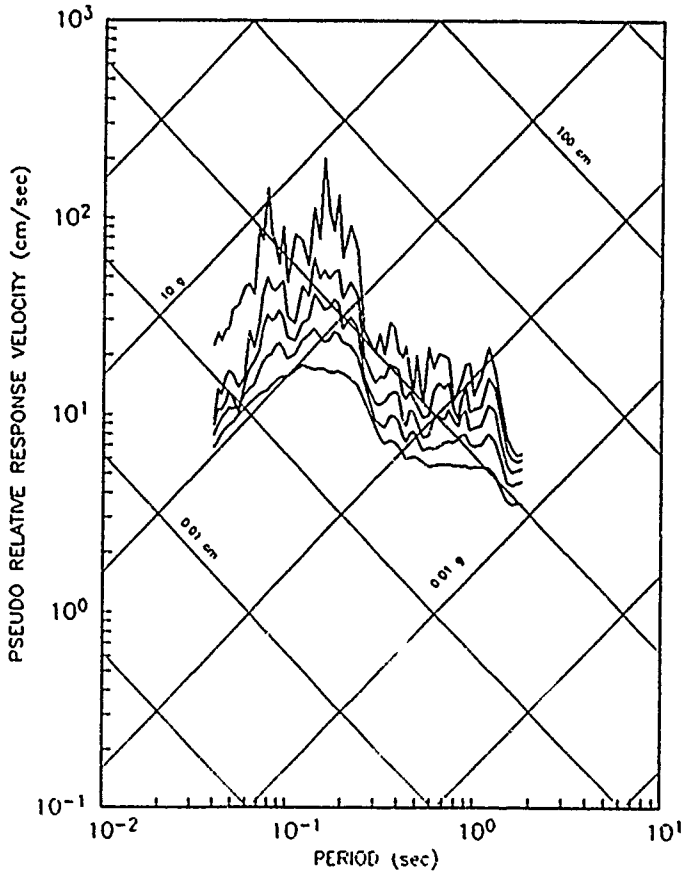
ENEL DCO-SERVIZIO GEOTECNICO
DAMPING VALUES 0 PERCENT
2 PERCENT
5 PERCENT
10 PERCENT
20 PERCENT
19H34M54S
COMP. EW
0636 EARTHQUAKE

RECORDED AT CALITRI
23-NOV-80

ITA 27

ACAS7803191T





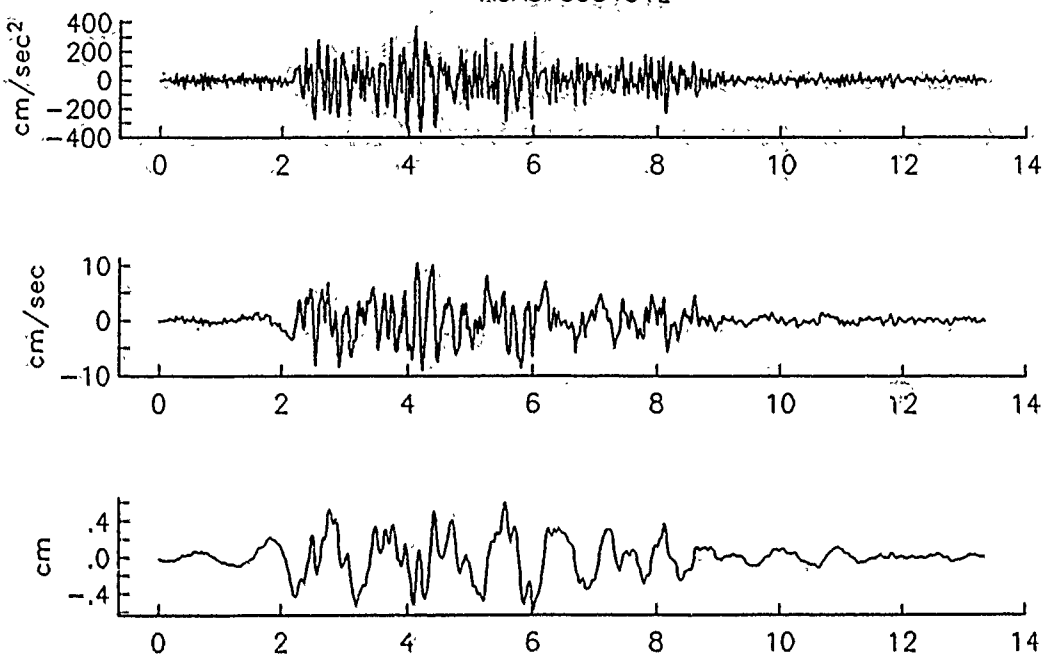
ANDERSON/VETTER '89

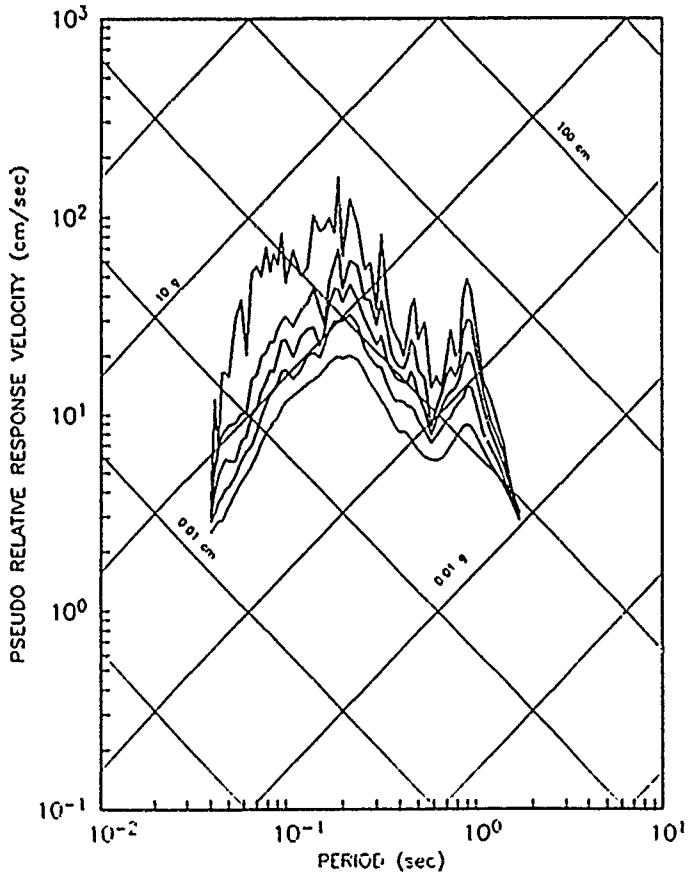
ACAS7803191T

MEX 18

Acapulco SCP Acc: 383; Vel 10.63; Disp 0.61 Dur 5% 11.6 Hard Site

ACAS7803191L



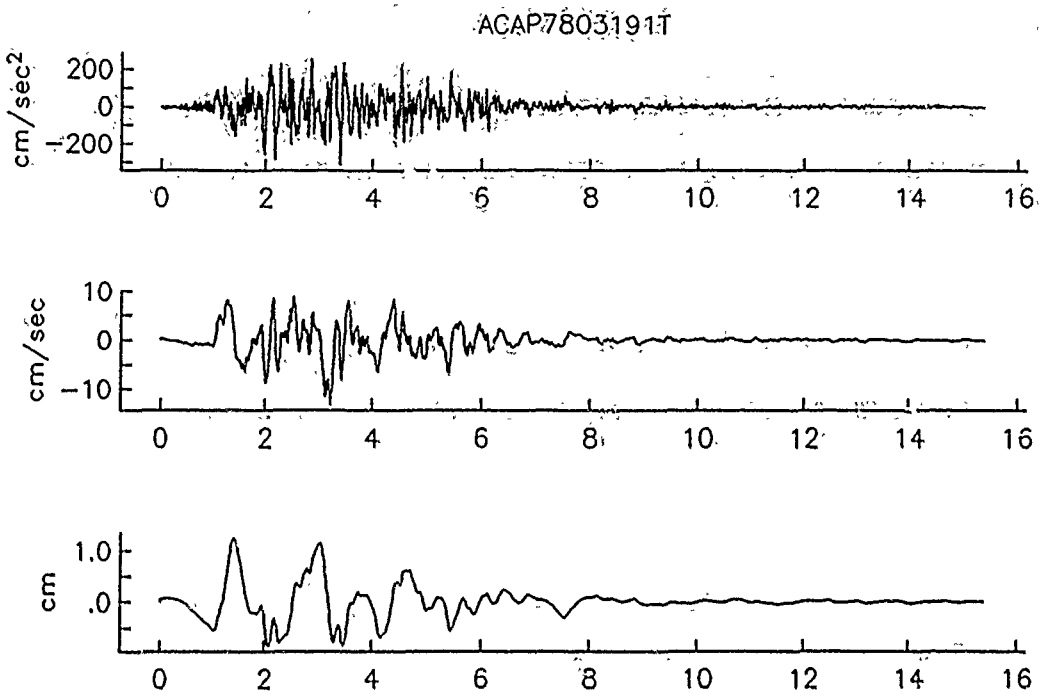


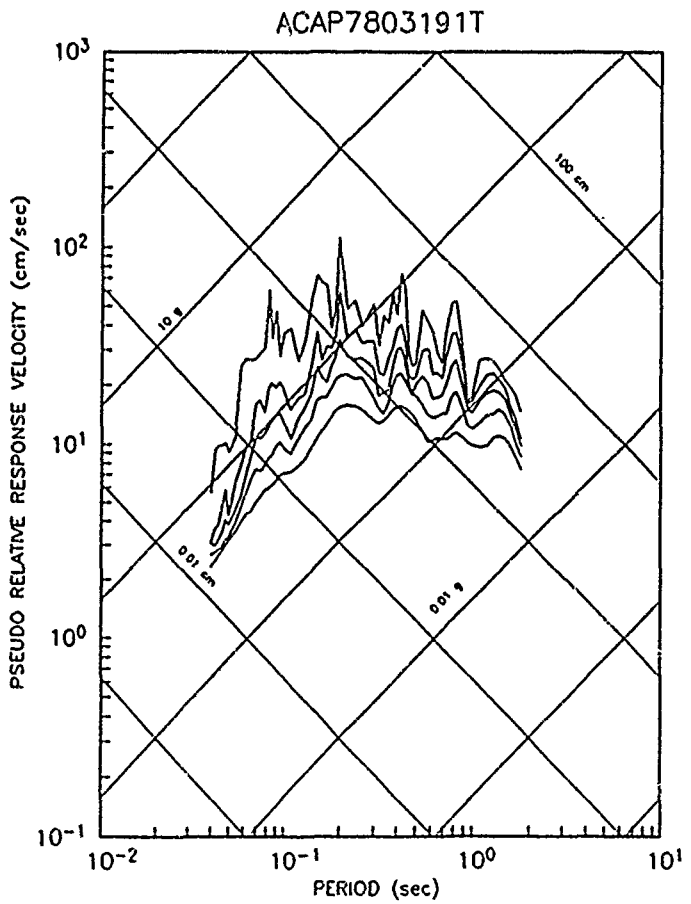
ANDERSON/VETTER '89

ACAS7803191L

MEX 19

MEX 20 Acapulco Pellandini 780319 Acc 315; Vel 13.22; Disp0.35; Dur 5% 6.8 Rock



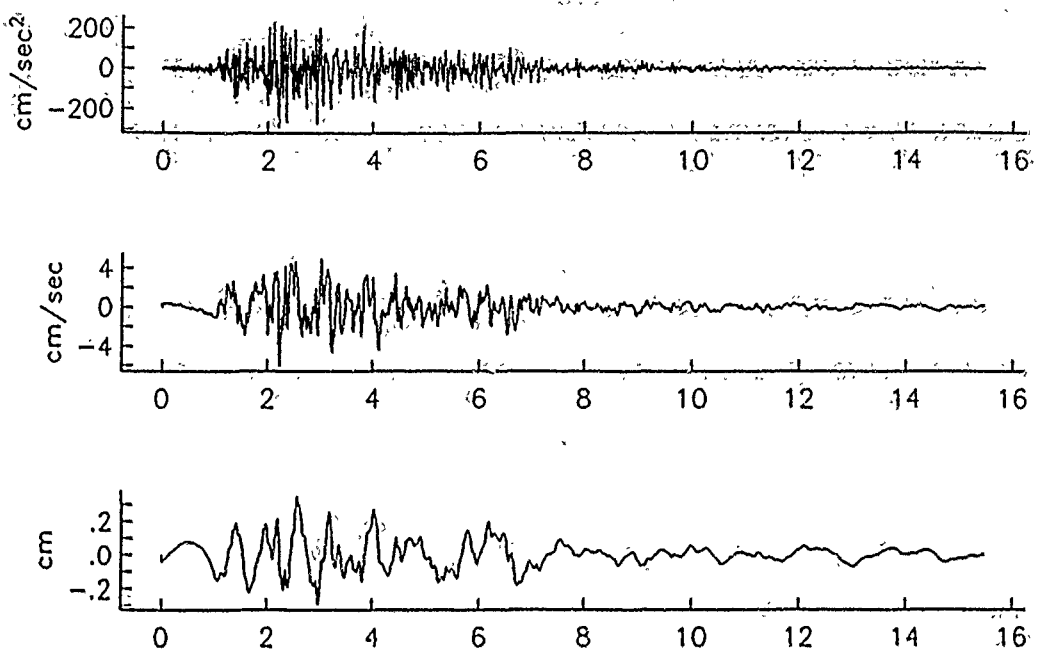


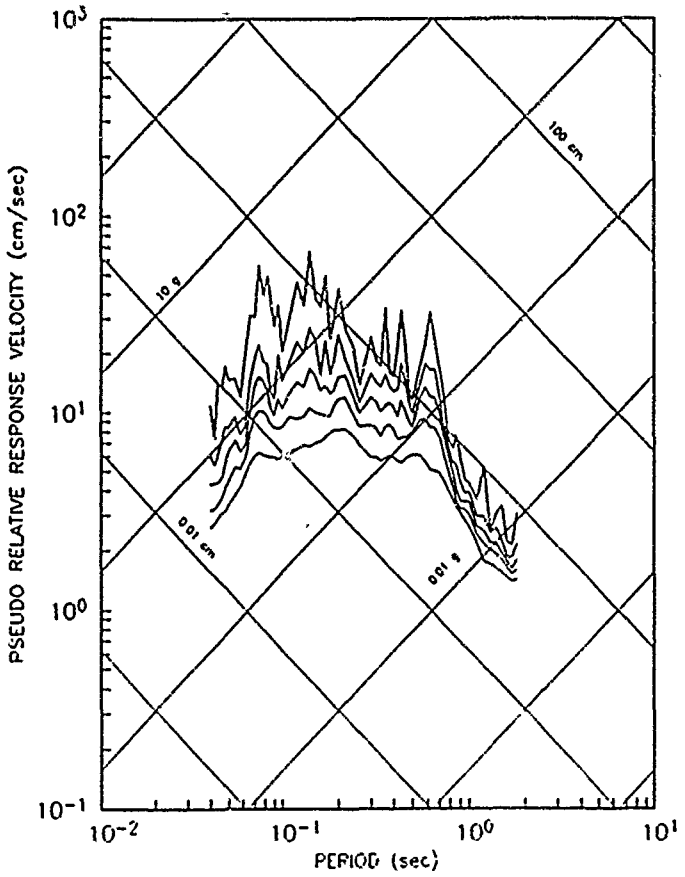
ANDERSON/VETTER '89

ACAP7803191T

MEX 20

ACAP7803191L





ANDERSON/VETTER '89

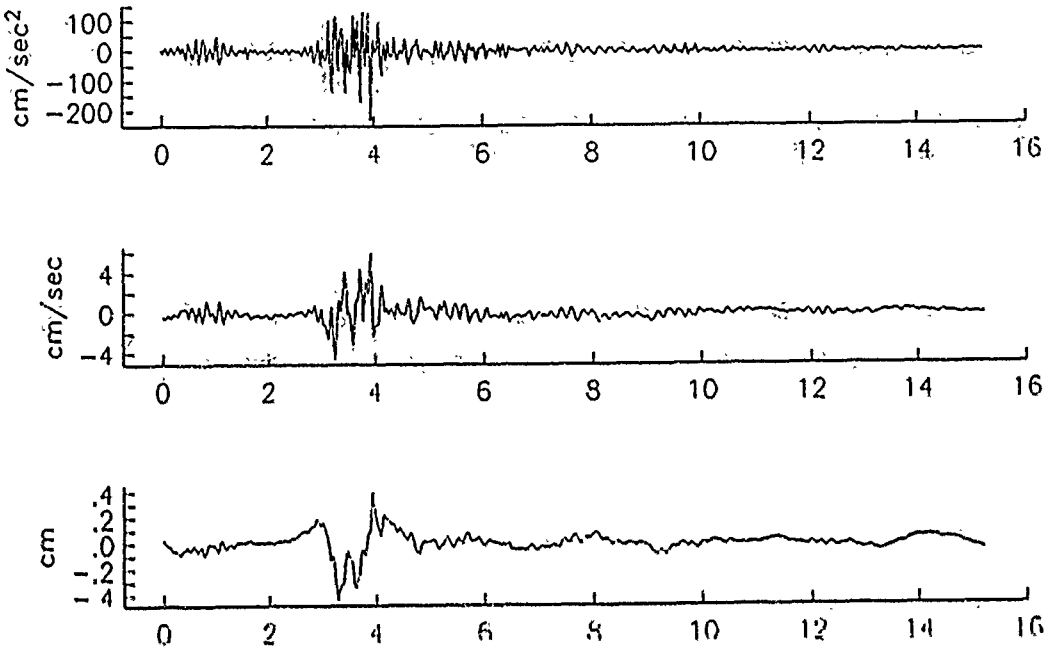
ACAP7803191L

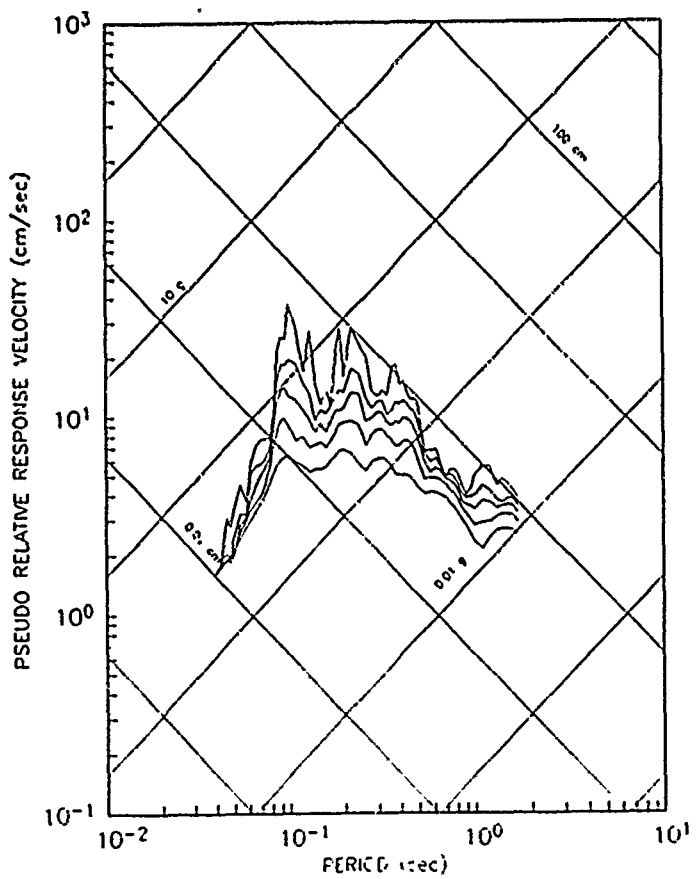
MEX 21

MEX 35 810917 San Marcos/Guerrero

Acc 233; Vel 6.15; Disp 0.43; Dur 5% 4.2 Soft Site

SMAR8109171T





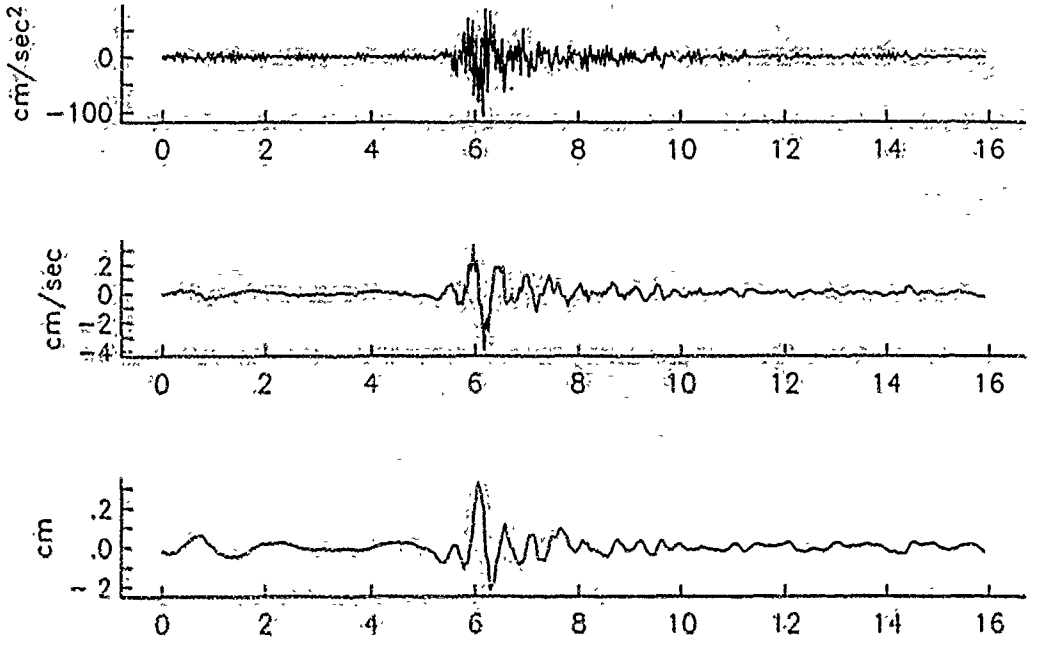
ANDERSON/VETTER '89

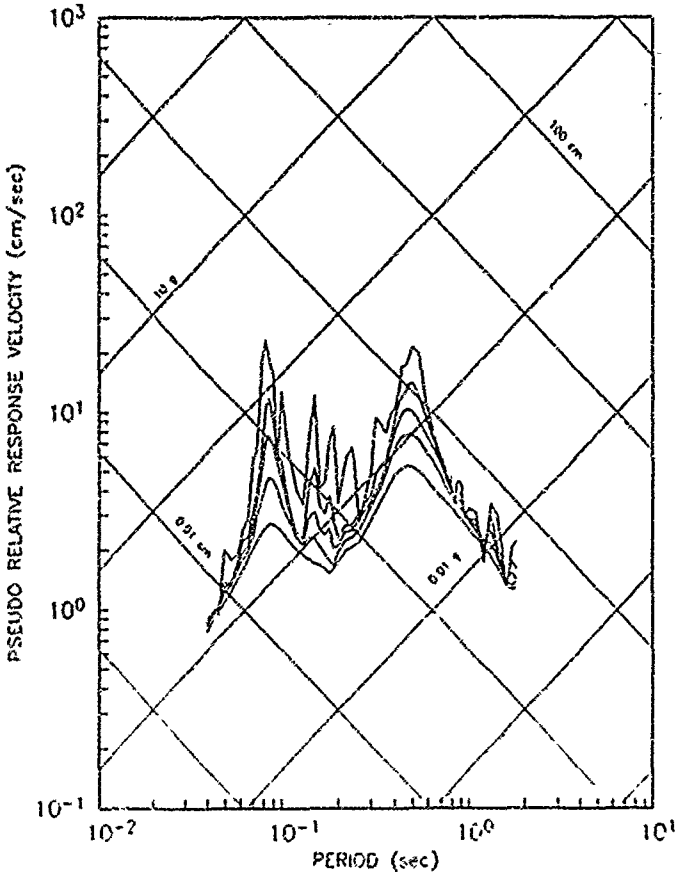
SMAR8109171T

MEX 35

Acapulco Pellandini Acc 109; Vel 3.99; Disp 0.33; Dur 5% 0.9 Rock

ACAP8407141T



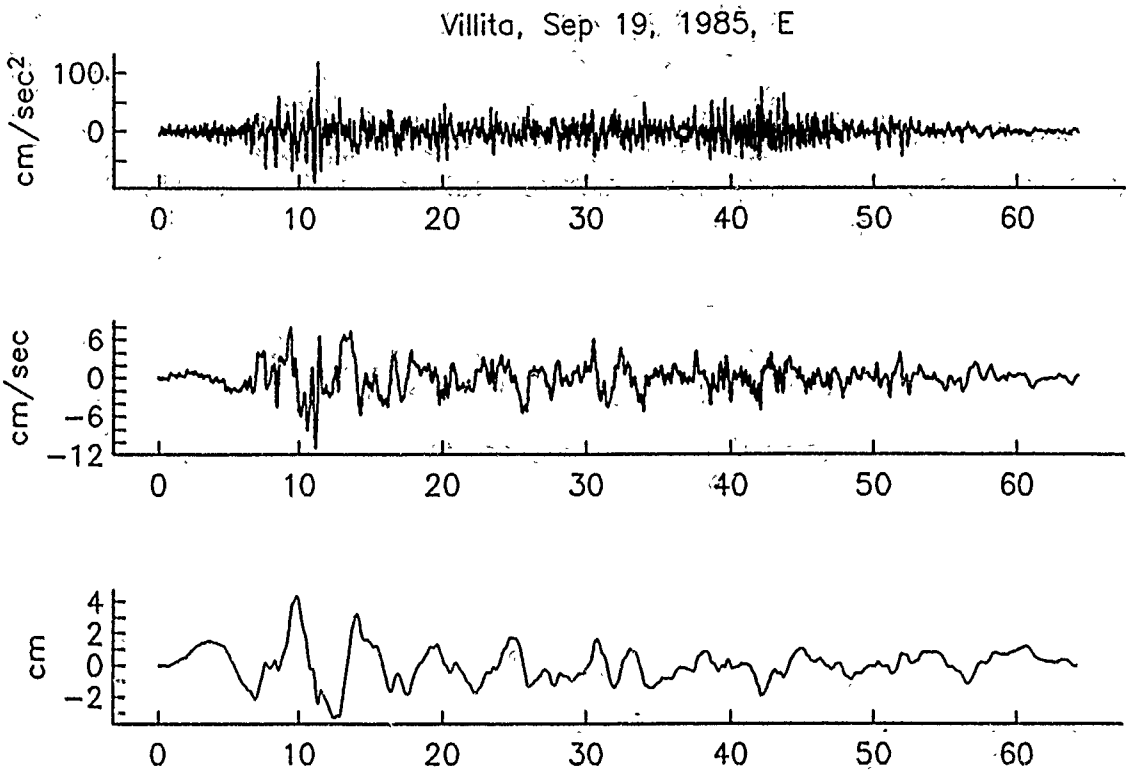


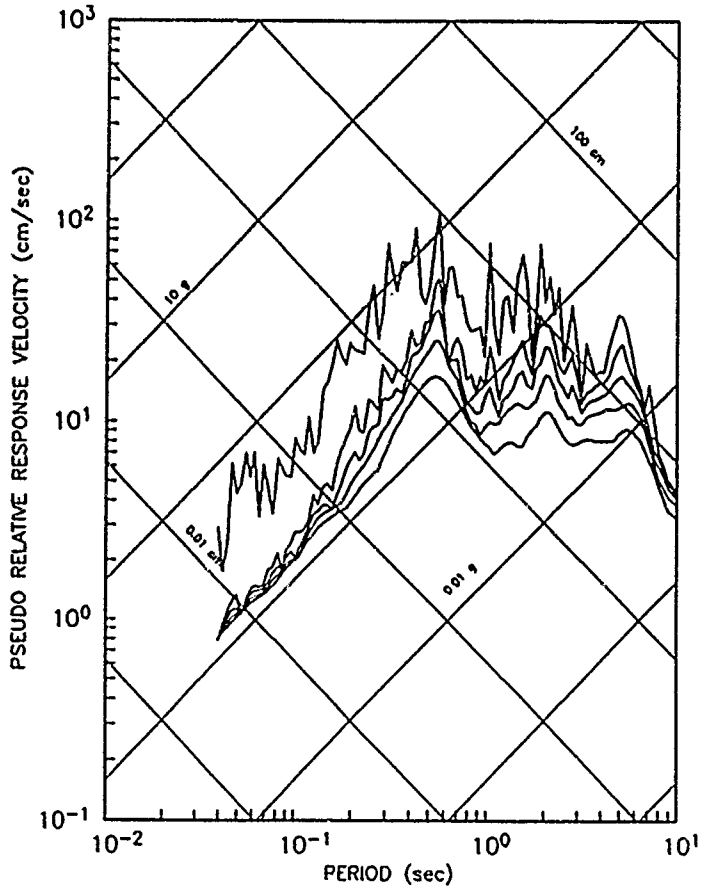
ANDERSON ET AL '89

ACAP8407141T

MEX 44

MEX 47 850919 La Villita Acc 125; Vel 16.1; Disp 7.8; Dur 37.5 Rock

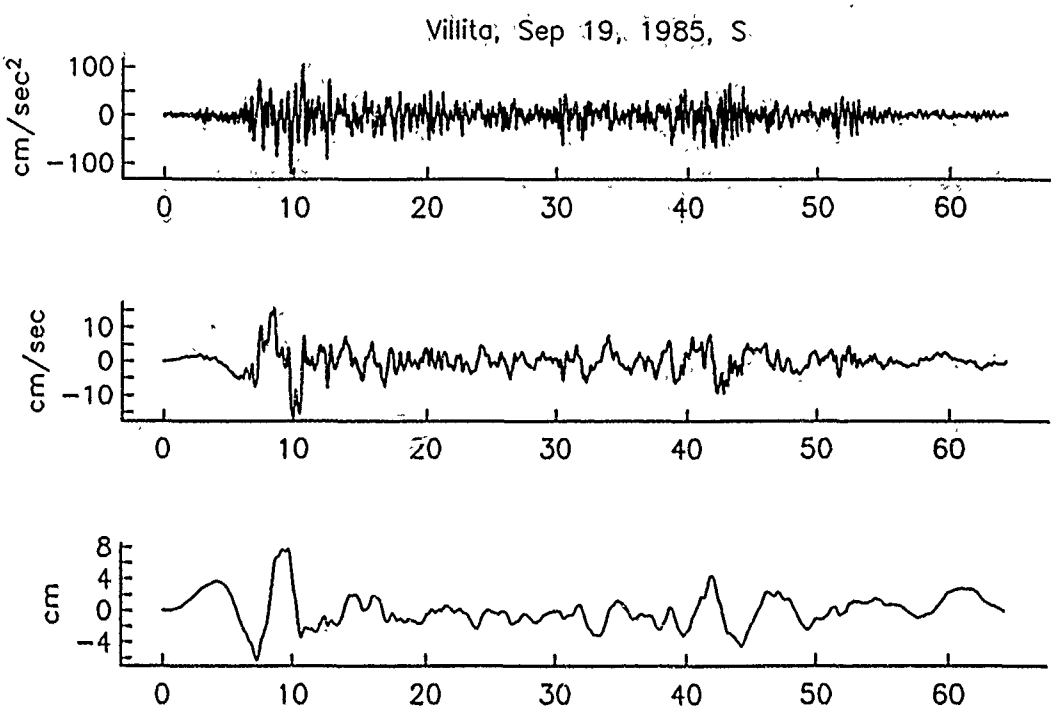


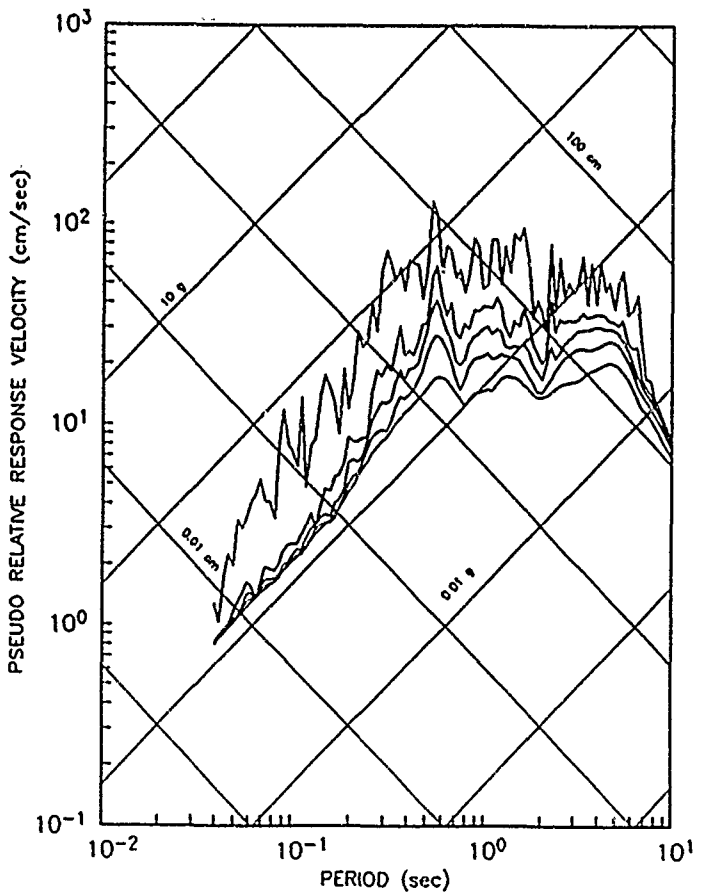


ANDERSON ET AL '89

Villita
Sep 19, 1985, E

MEX 47

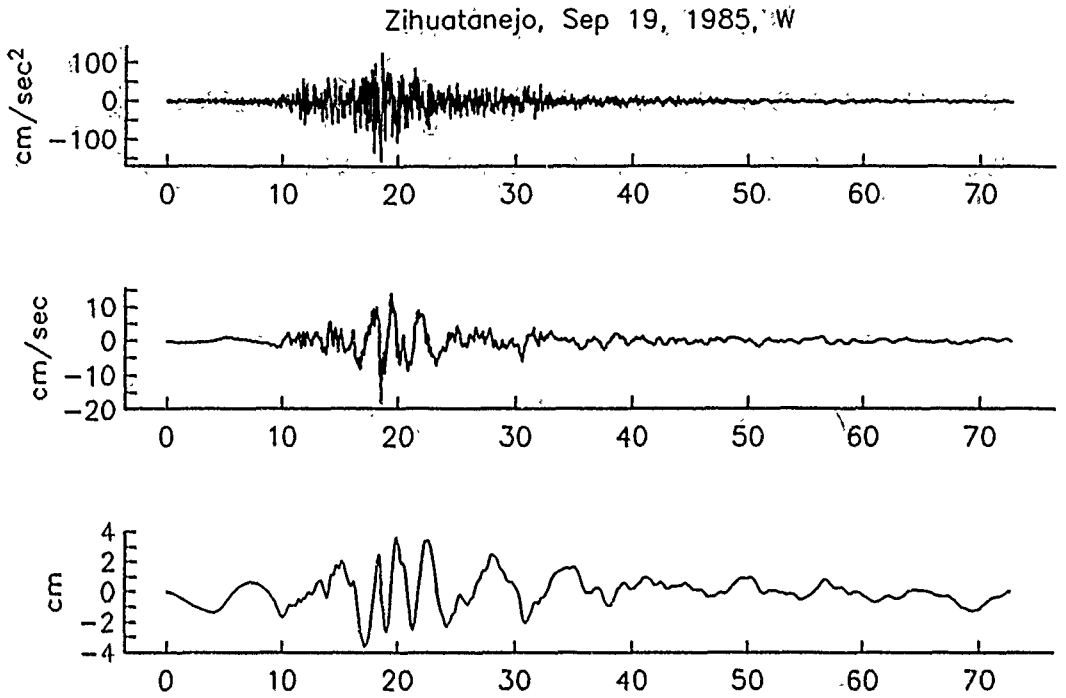


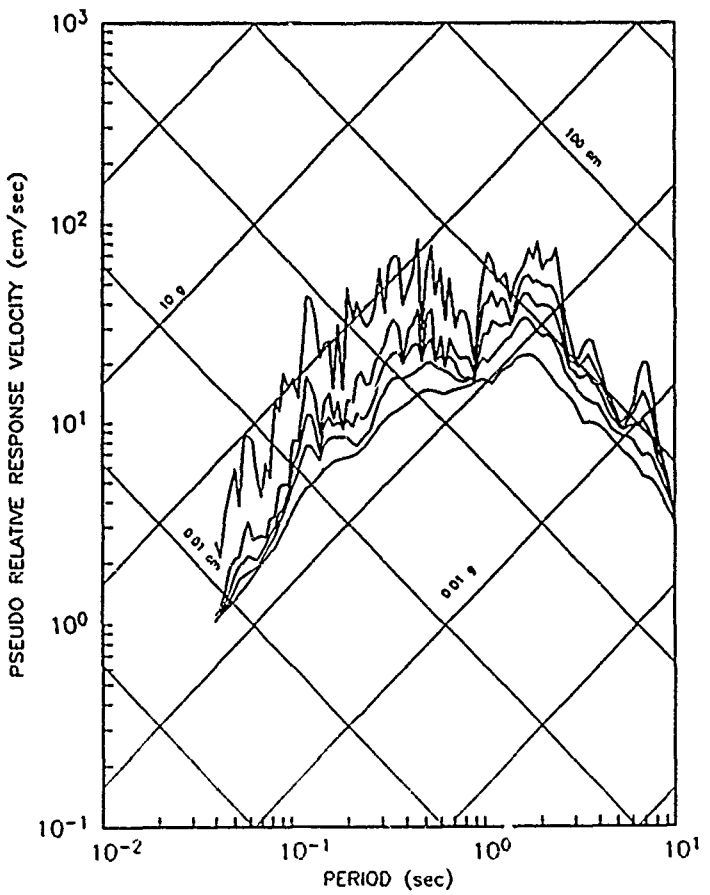


ANDERSON ET AL '89

Villita
Sep 19, 1985, S

MEX 48



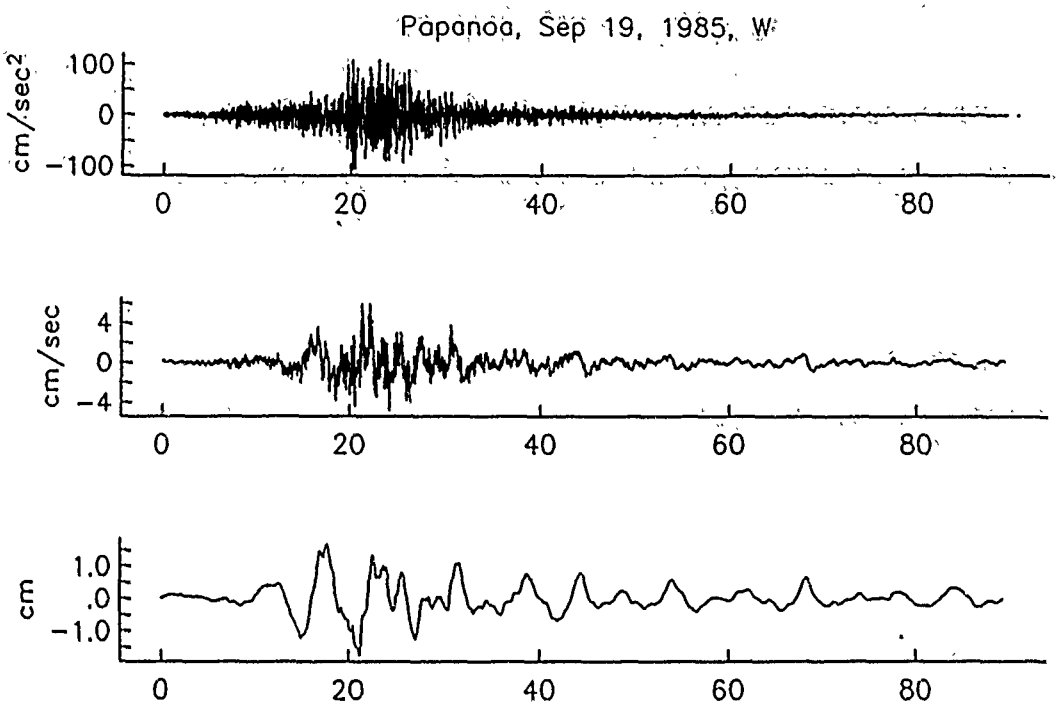


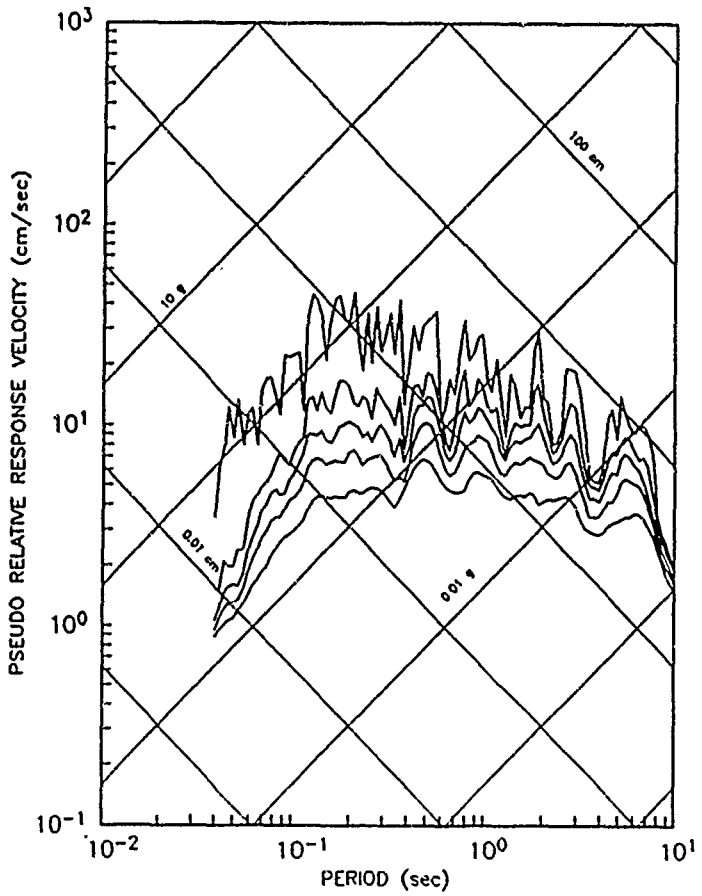
ANDERSON ET AL '89

Zihuatanejo
Sep 19, 1985, W

MEX 51

MEX 53 850919 Papanoa Accel 110; Vel 6.0; Disp 1.8; Dur 5% 9.5. Rock



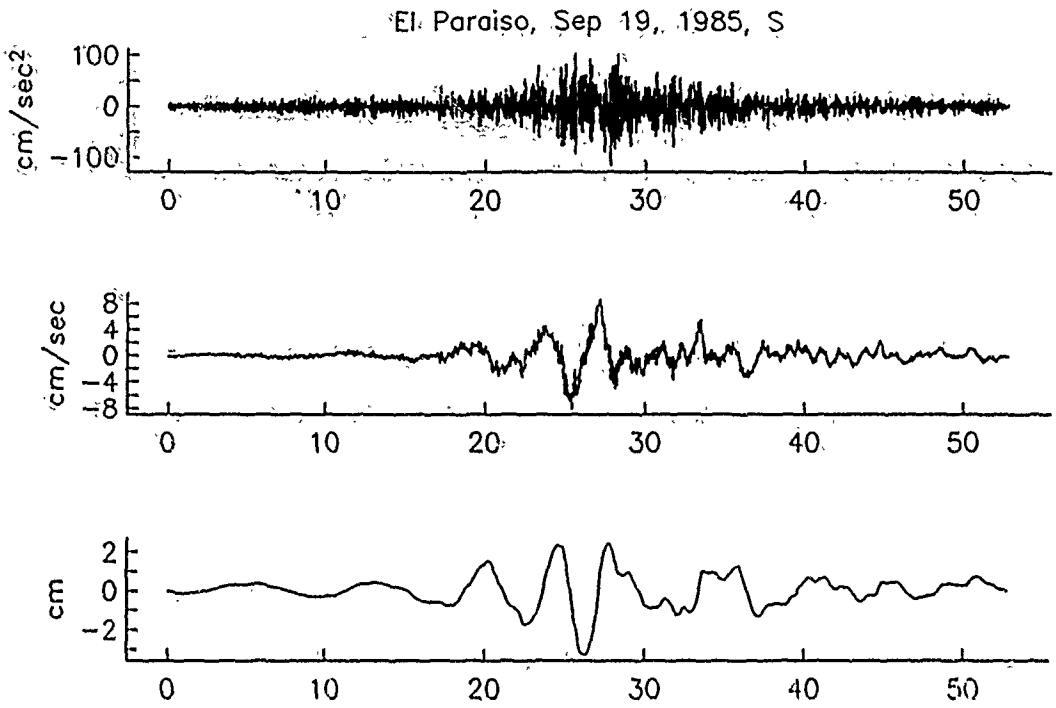


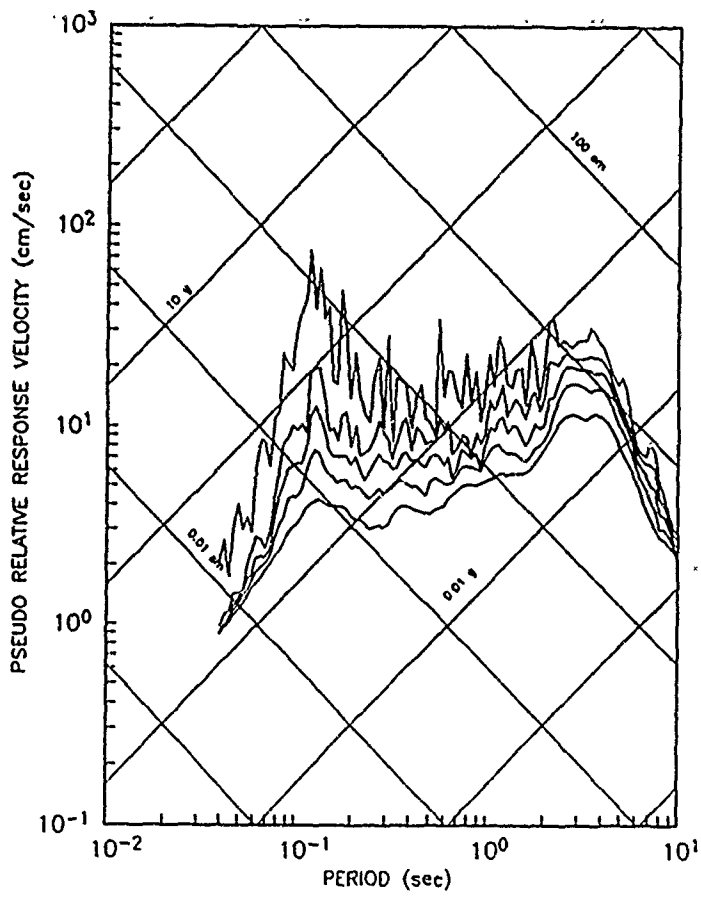
ANDERSON ET AL '89

Papanoa
Sep 19, 1985, W

MEX 53

MEX 54 El Paraiso 850919 Accel 120; Vel 8.7; Disp 3.3; Dur 5% 13.0 Rock

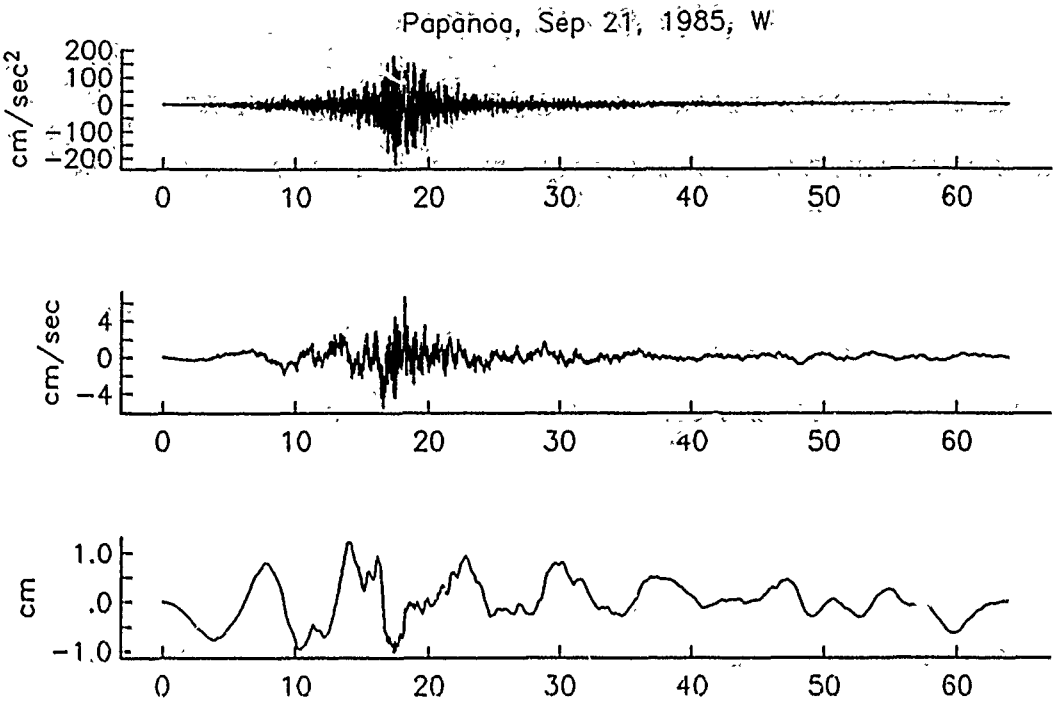


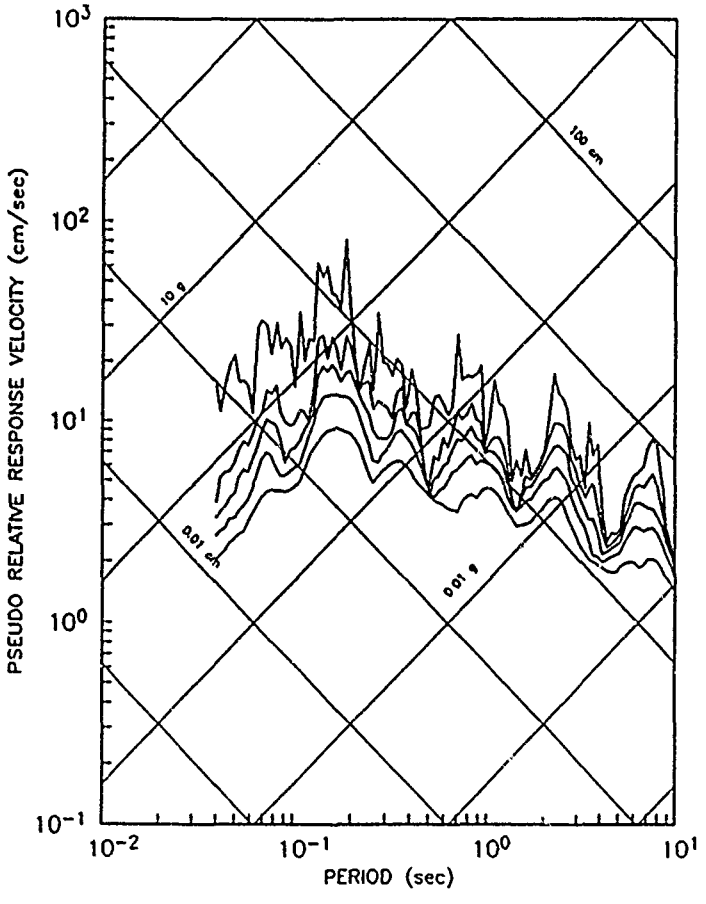


ANDERSON ET AL '89

El Paraiso
Sep 19, 1985, S

MEX 54



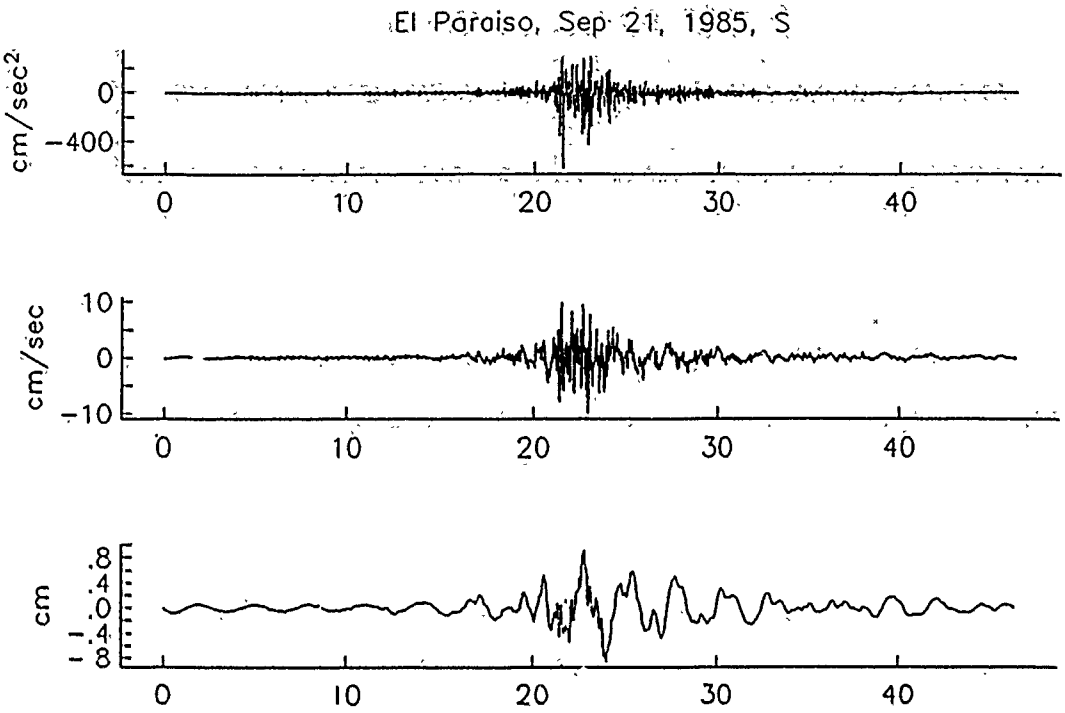


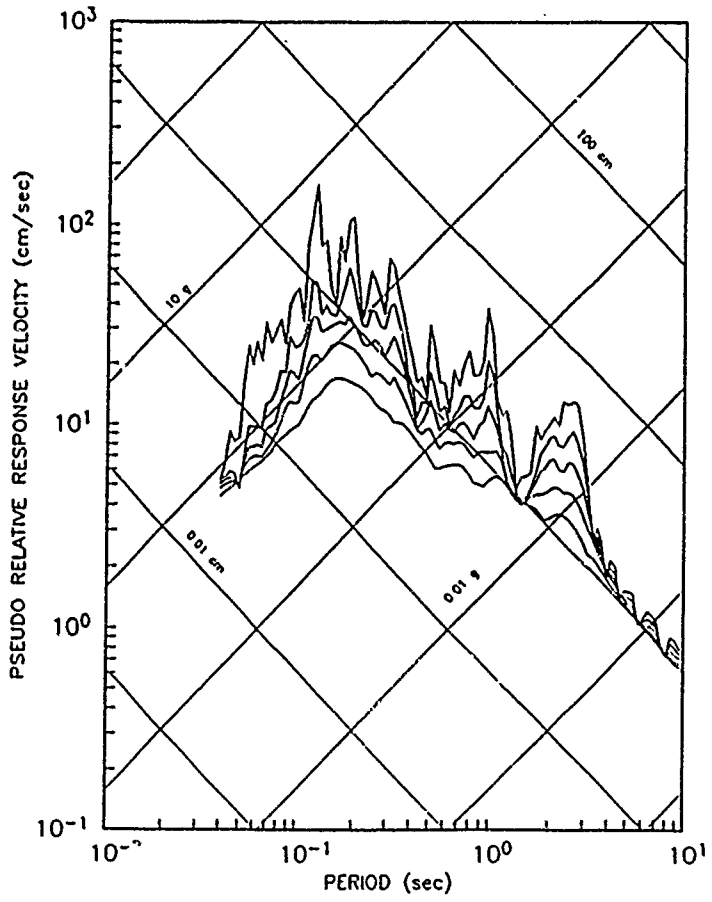
ANDERSON ET AL '89

Papanoa
Sep 21, 1985, W

MEX 62

MEX 63 850921 El Paraiso Accel 625 cm/sec^2; Vel 10.0 cm/sec; Disp 0.9 cm; Dur 5%g 12.3 sec



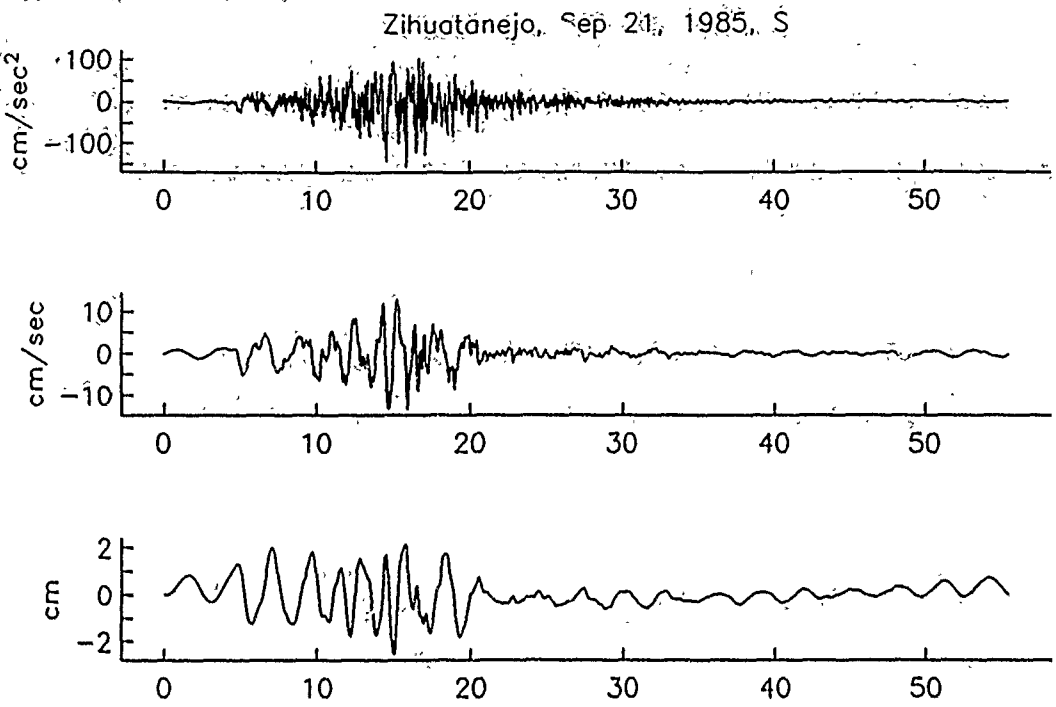


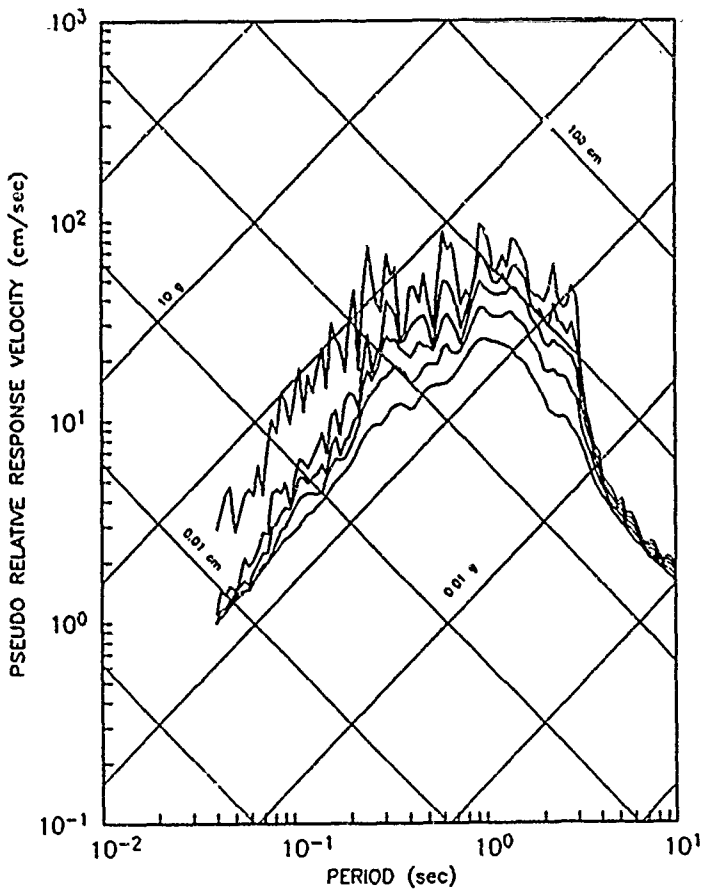
ANDERSON ET AL '89

El Paraiso
Sep 21, 1985, S

MEX 63

MEX 65 850921 Zihuatanejo Accel 153; Vel 13.5; Disp 2.6; Dur 5% 10.6 Rock



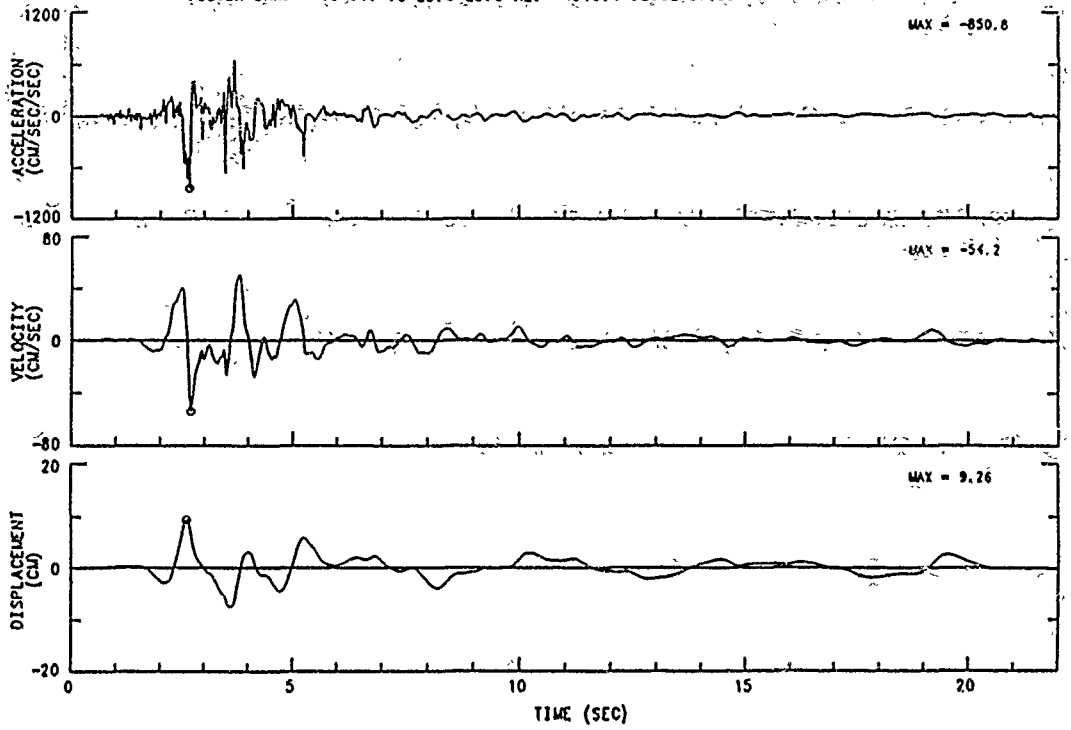


ANDERSON ET AL '89

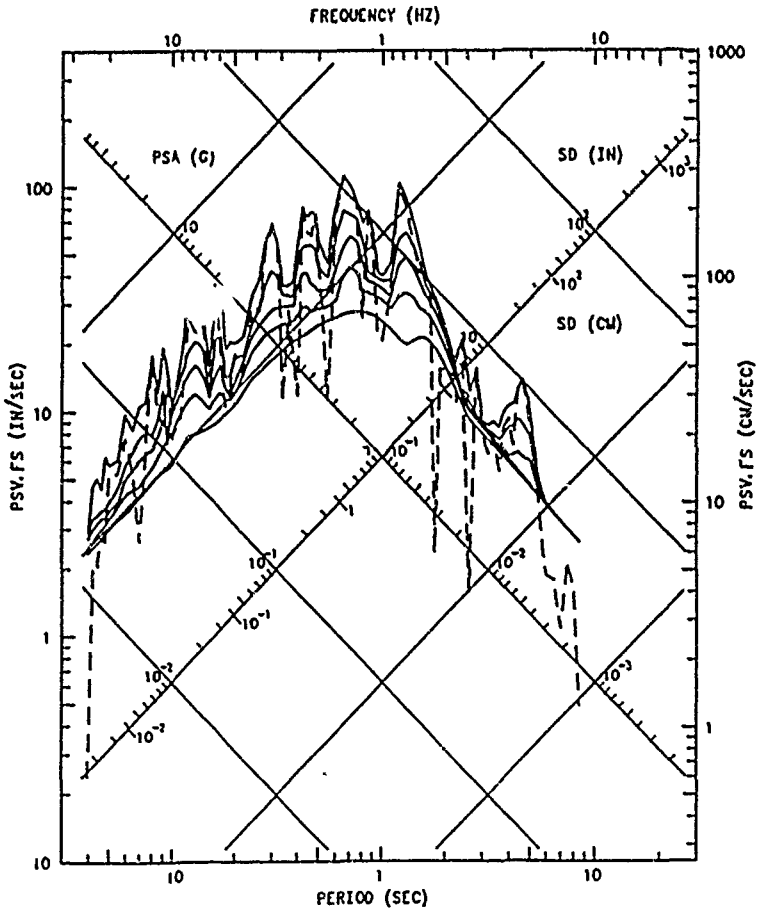
Zihuatanejo
Sep 21, 1985, S

MEX 65

CERRO PRIETO, BAJA CALIFORNIA EARTHQUAKE FEBRUARY 6, 1987 19:45 PST
CERRO PRIETO, BAJA CALIFORNIA CHN 1: 251 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .08-.16 TO 23.0-25.0 HZ. 91004-S2582-87039.03 041488.1456-0C87A004



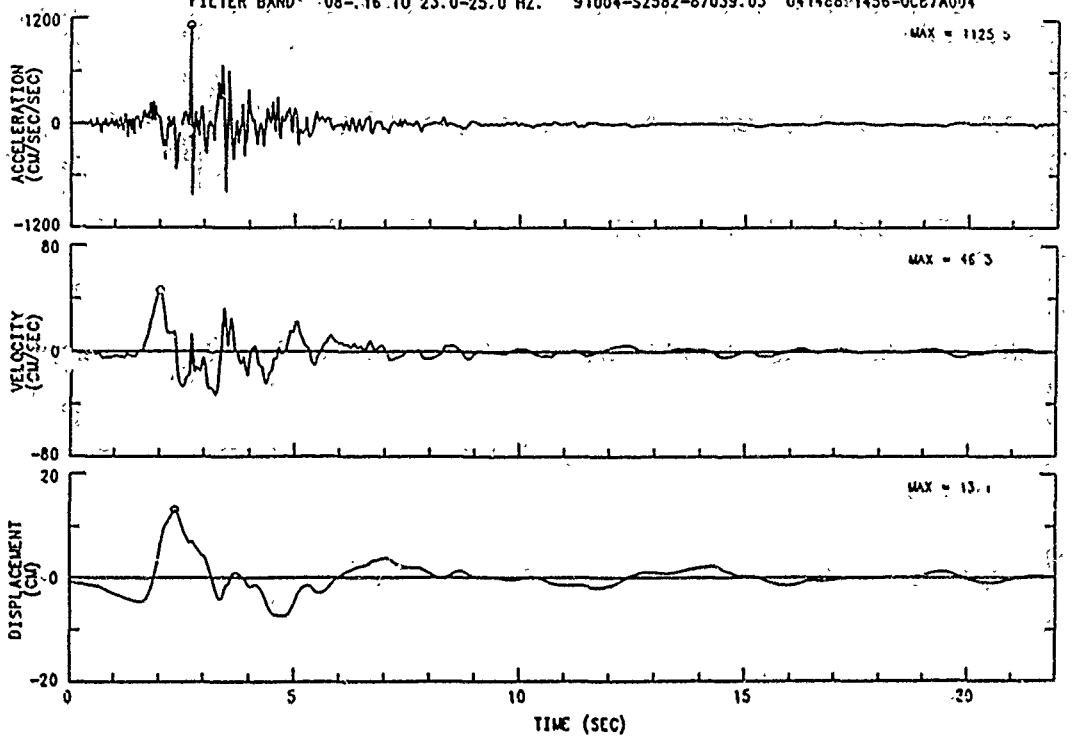
CDMG OSMS 87-04



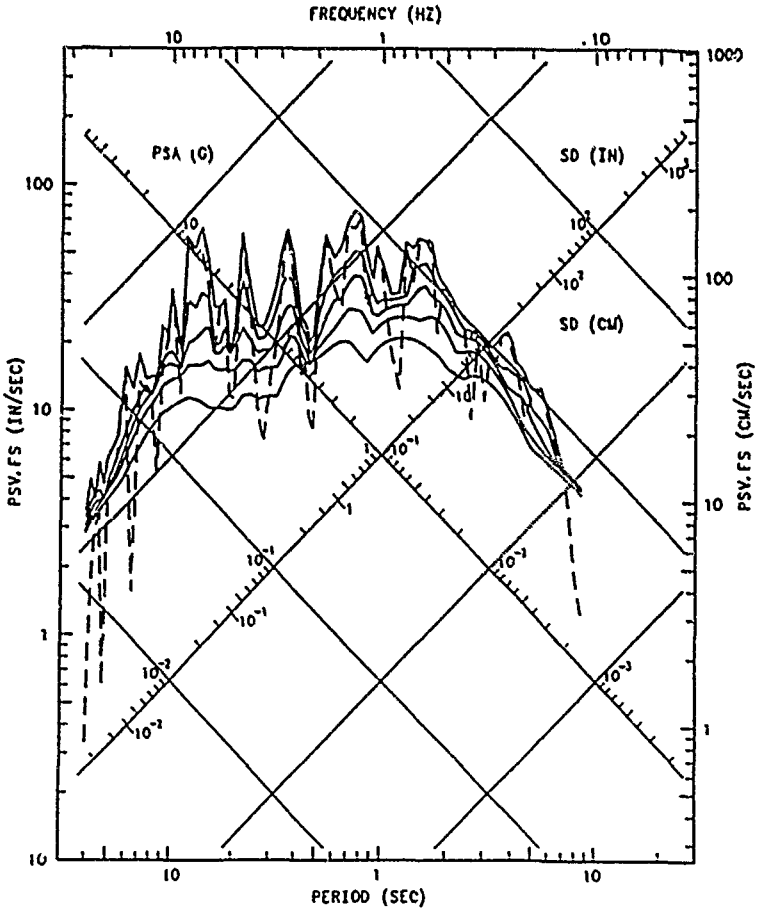
CERRO PRIETO, BAJA CALIFORNIA
CHN 1: 251 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
91004-S2582-87039.03 041588.1512-0C87A004
—— RESPONSE SPECTRA: PSV, PSA & SD
– – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

CERRO PRIETO, BAJA CALIFORNIA EARTHQUAKE
FEBRUARY 6, 1987 19:45 PST

MEX 71



CDMG OSMS 87-04

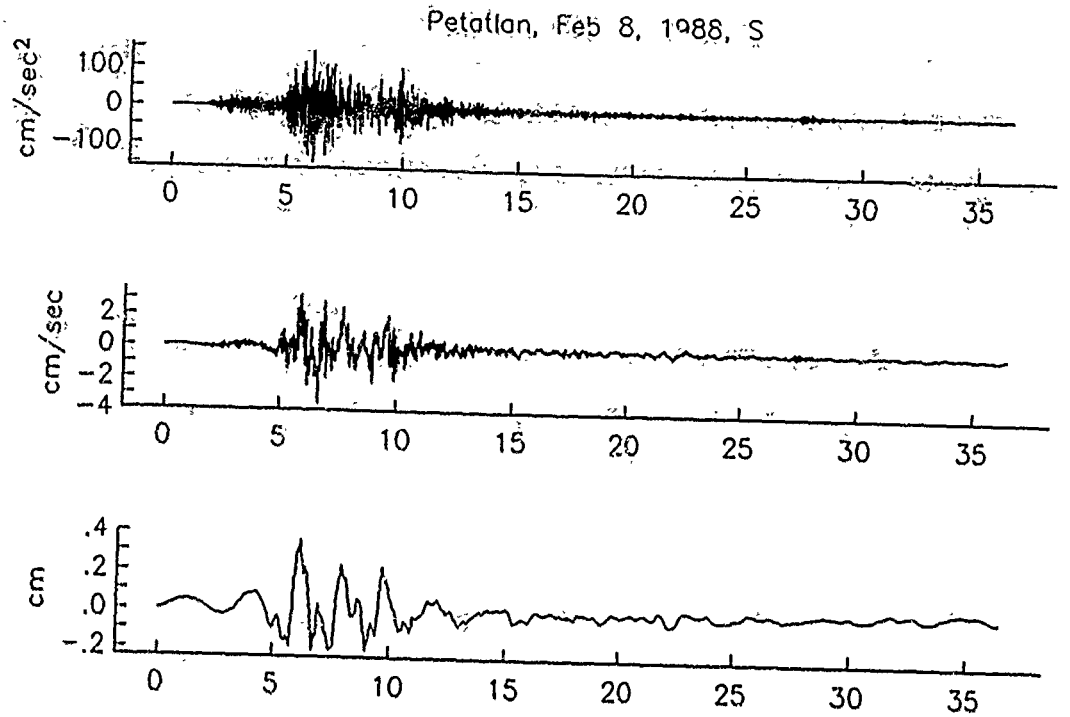


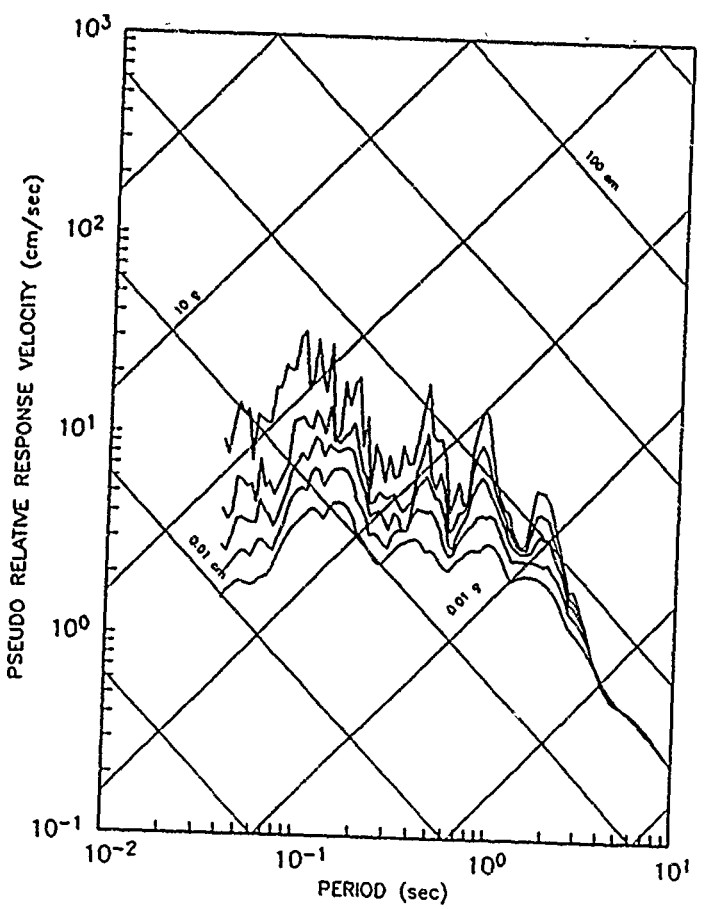
CERRO PRIETO, BAJA CALIFORNIA
CHN 3 161 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ
91004-S2582-87039.03 041588 1512-QC87A01
—— RESPONSE SPECTRA: PSV, PSA & SD
– – – FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

CERRO PRIETO BAJA CALIFORNIA EARTHQUAKE
FEBRUARY 6, 1987 19 45 PST

MEX 72

MEX 76 880208 Petatlan Accel 147; Vel 3.6; Disp 0.4; Dur 5% 6.1; Rock



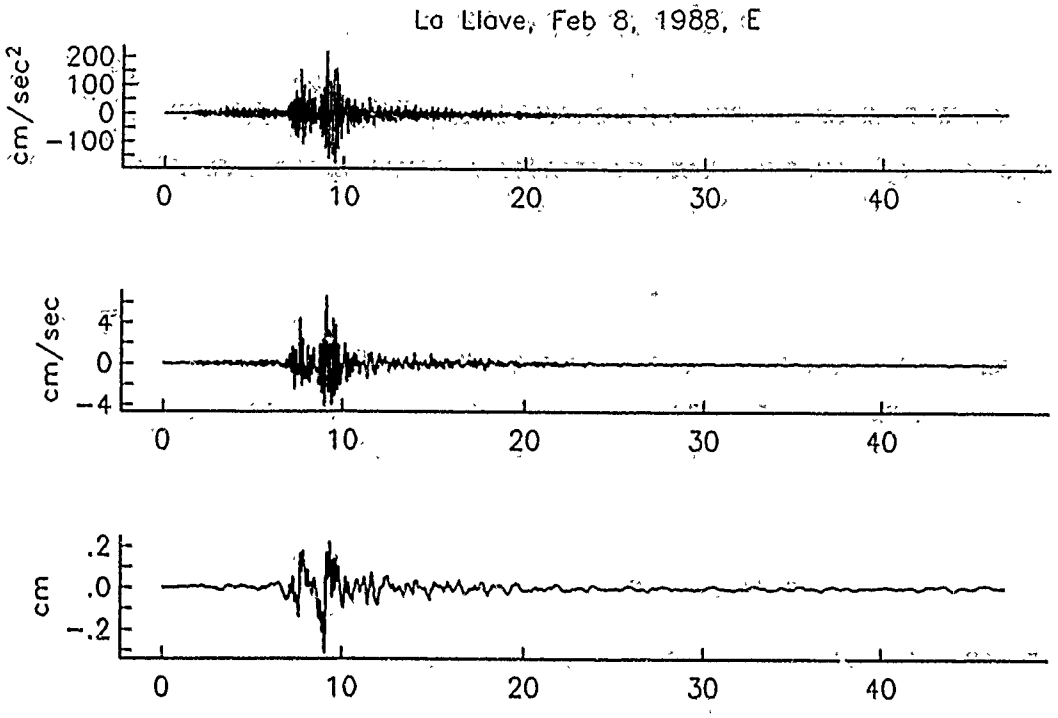


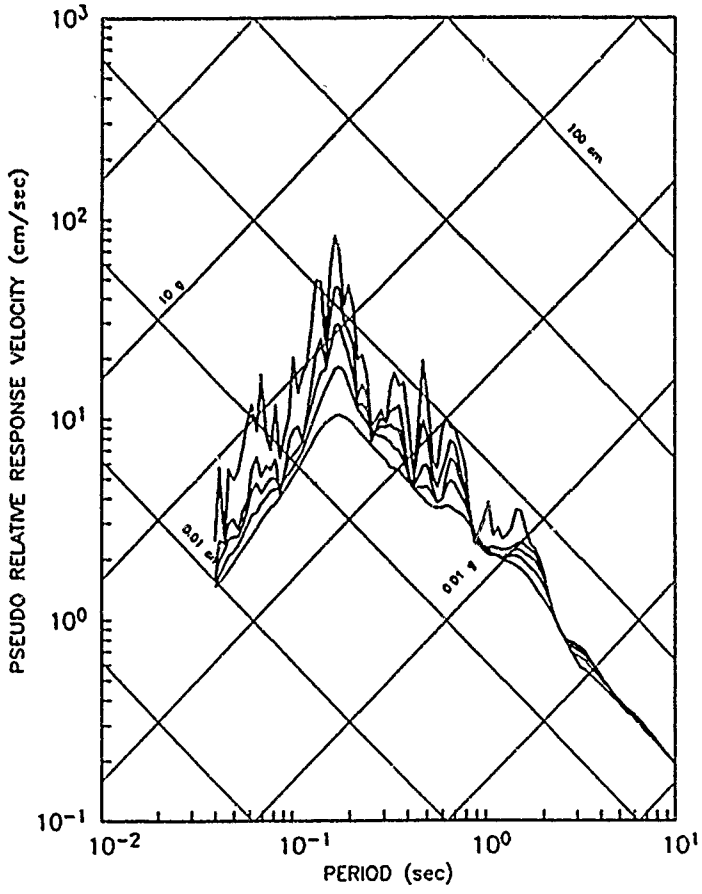
ANDERSON ET AL '89

Petatlan
Feb 8, 1988, S

MEX 76

MEX 80 880208 La Llave Accel 221; Vel 6.7; Disp 0.3; Dur 5% 4.2; Rock



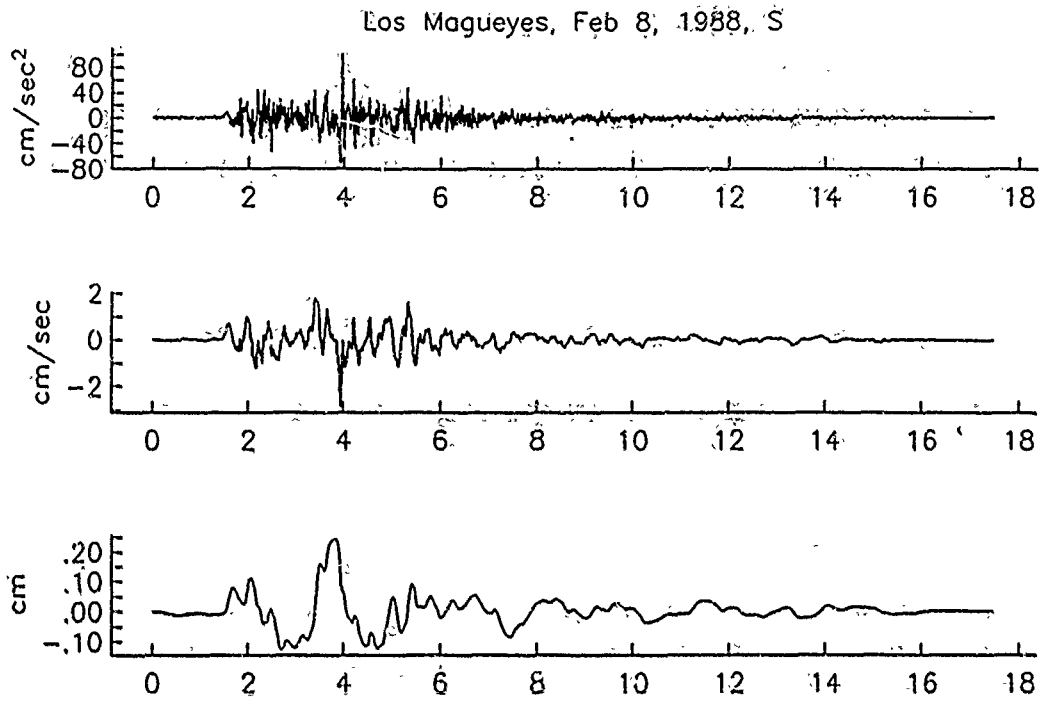


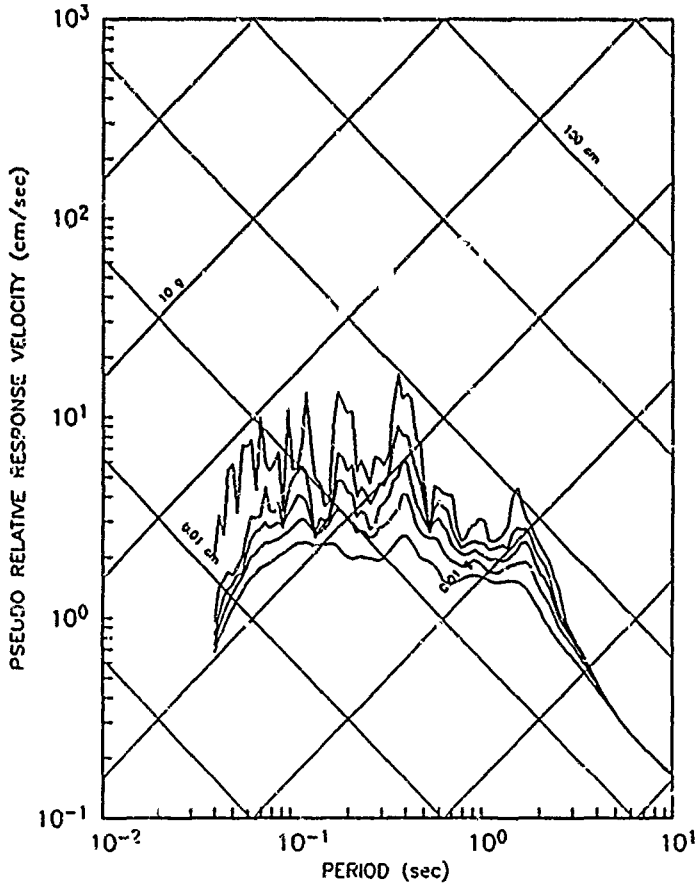
ANDERSON ET AL '89

La Llave
Feb 8, 1988, E

MEX 80

MEX 81 Los Magueyes 860208 Accel 102; Vel2.9; Disp 0.2; Dur 5%.2.8 Rock



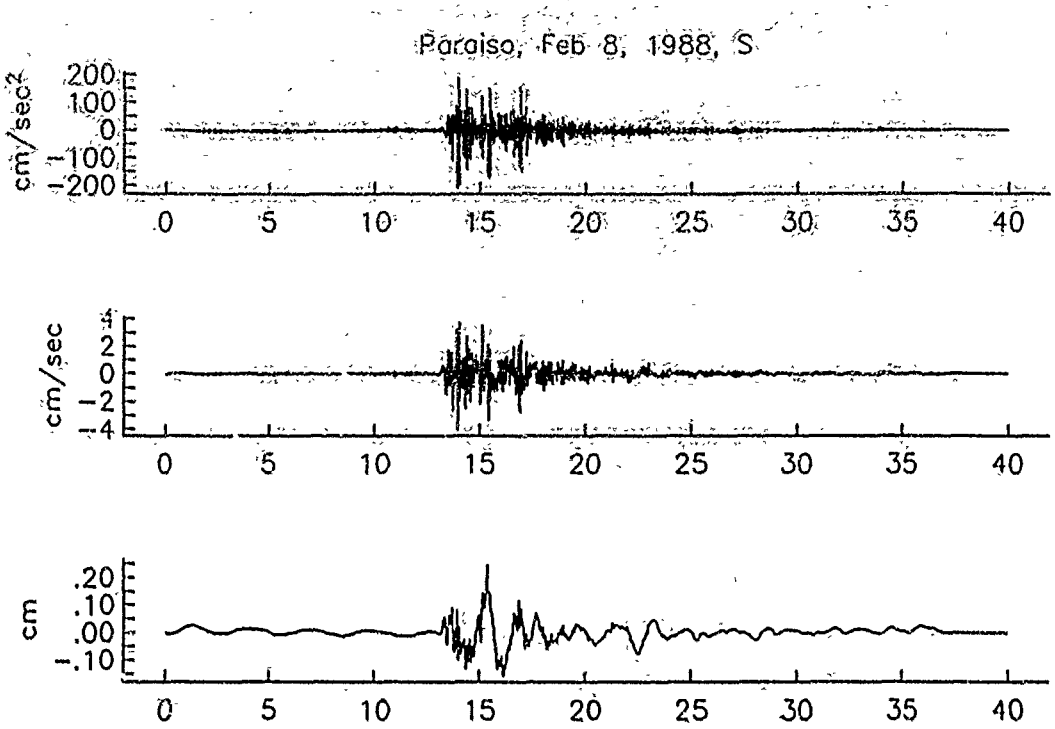


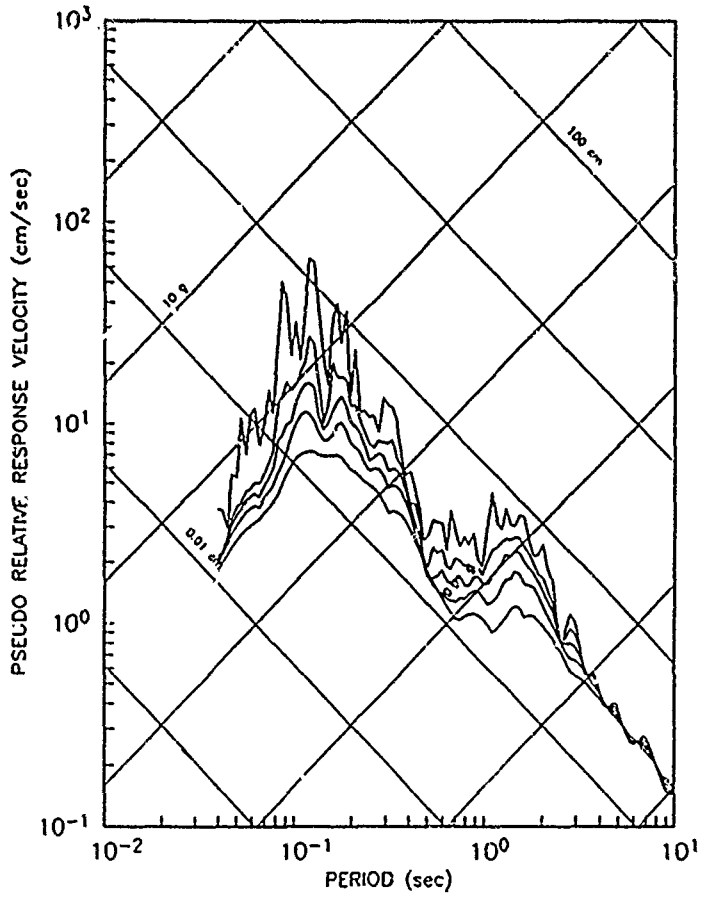
ANDERSON ET AL '89

Los Magueyes
Feb 8, 1988, S

MEX 81

MEX 83 880208 El Paraiso Accel 211; Vel 4.1; Disp0.2; Dur 5%:6 Rock

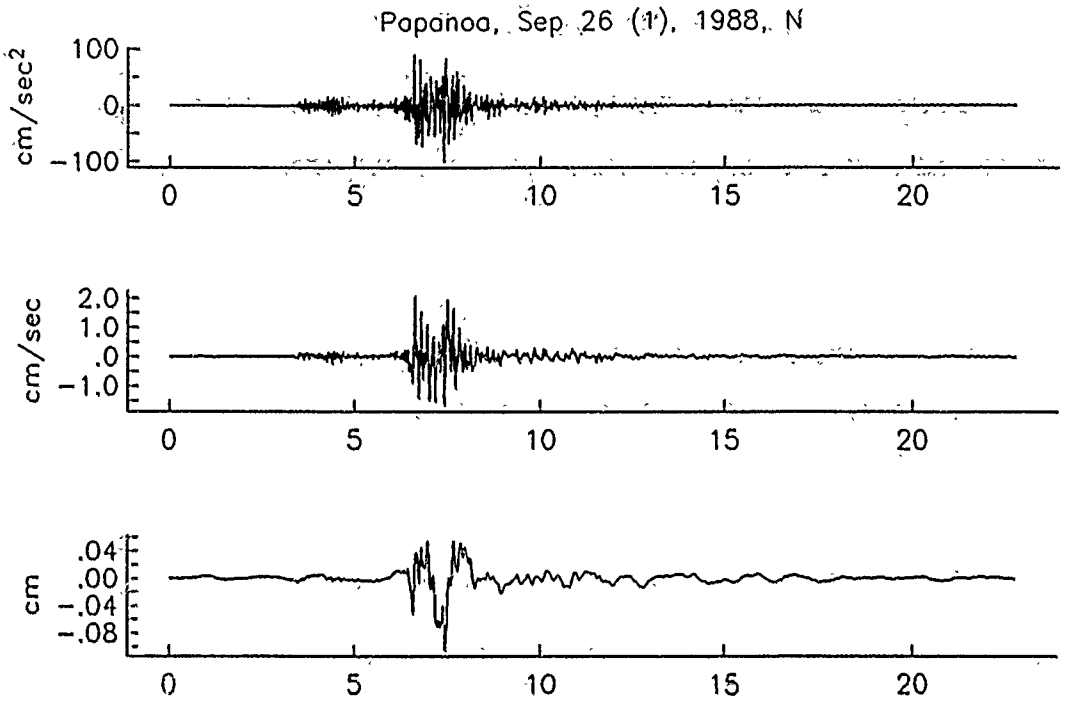


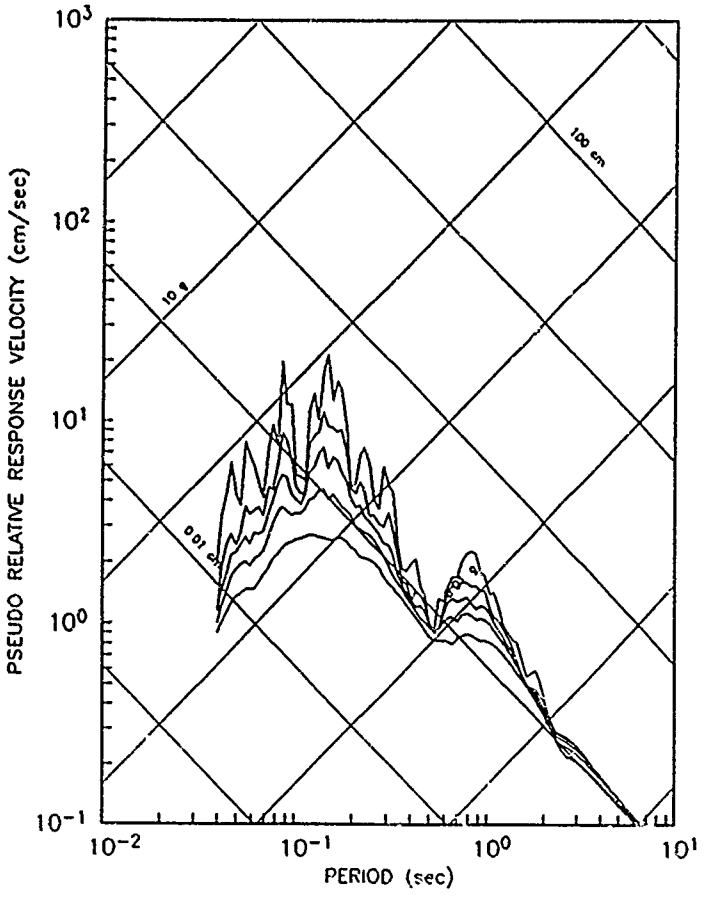


ANDERSON ET AL '89

Paraiso
Feb 8, 1988, S

MEX 83





ANDERSON ET AL '89

Papanoa

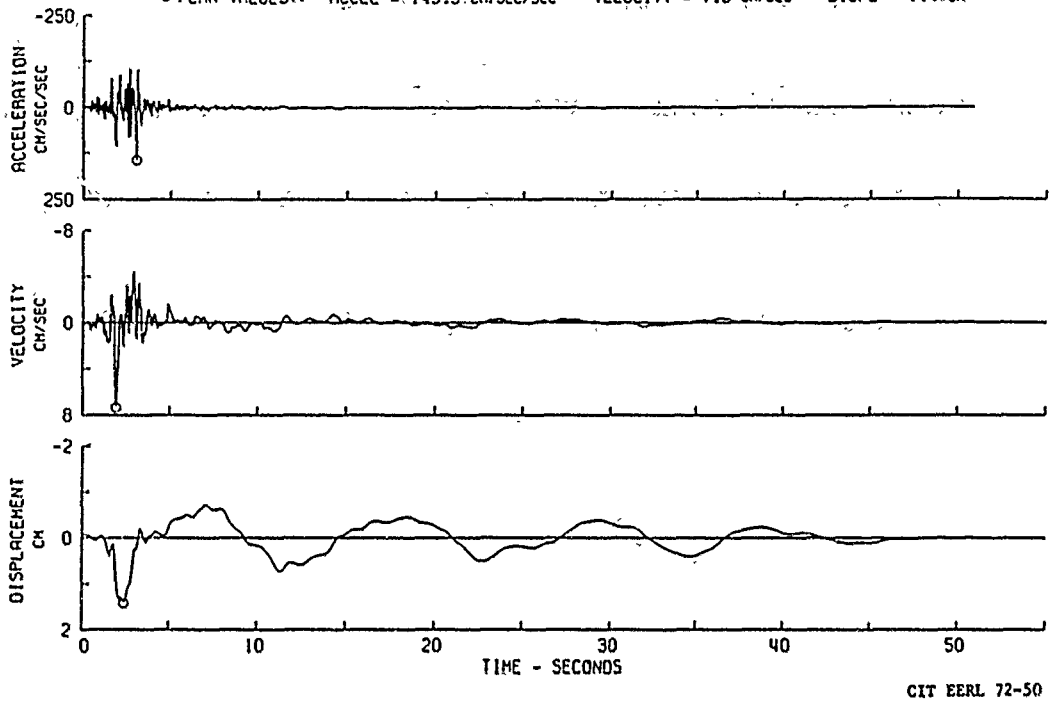
Sep 26 (1), 1988, N

MEX 87

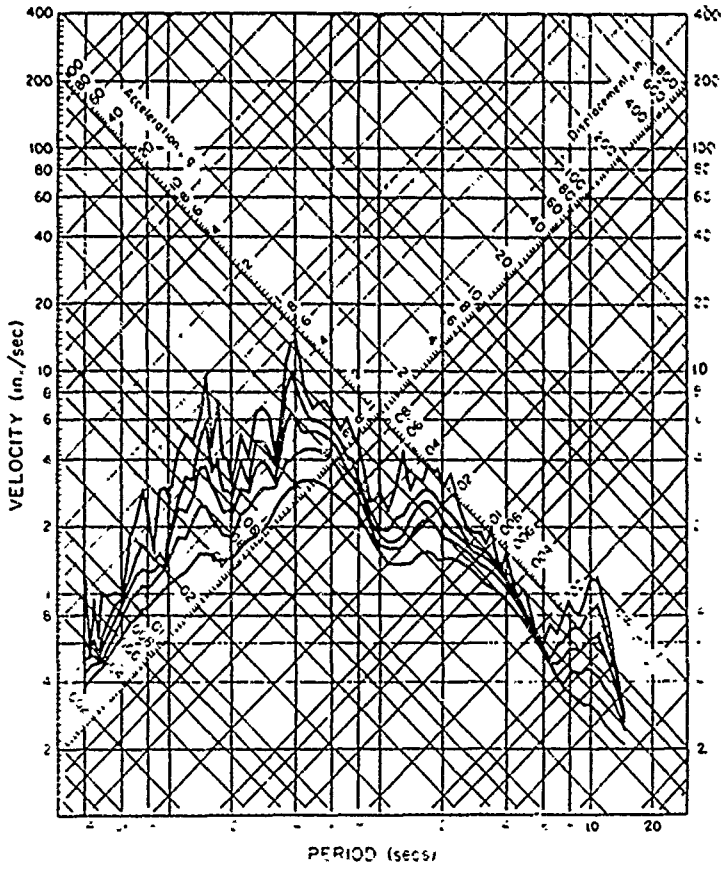
HELENA, MONTANA EARTHQUAKE OCT 31, 1935 - 1138 MST

1118025 35.001.0 HELENA, MONTANA CARROLL COLLEGE COMP N00E

PEAK VALUES: ACCEL = 143.5 CM/SEC/SEC VELOCITY = 7.3 CM/SEC DISPL = 1.4 CM



CIT EERL 72-50



CIT. EERL 73-80

1118025 35.001.0 HELENA, MONTANA CARROLL COLLEGE

COMP N00E

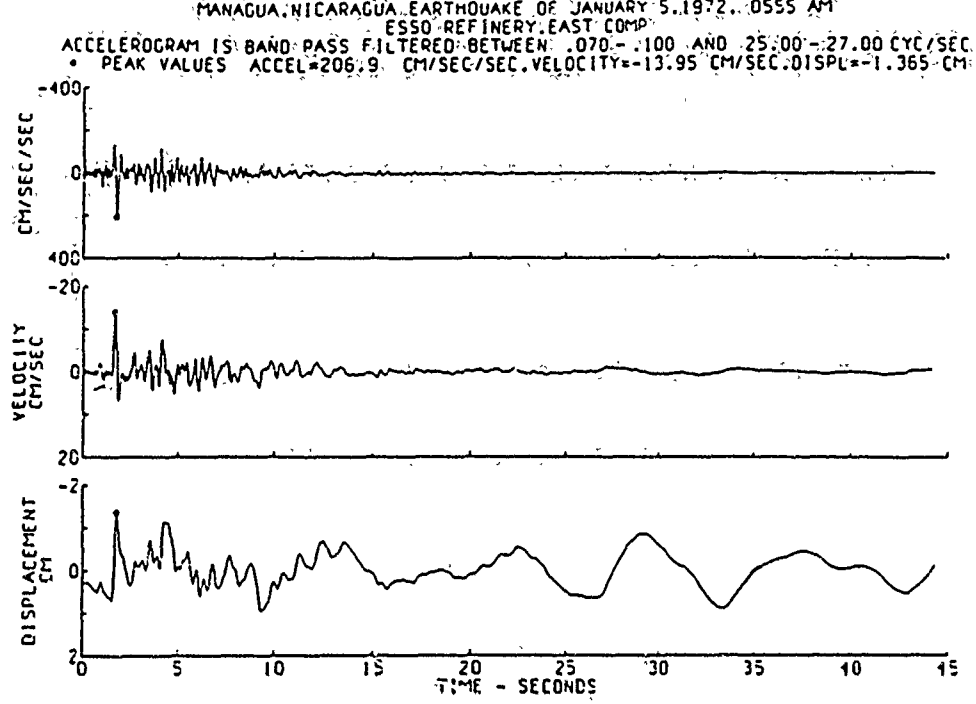
DAMPING VALUES ARE

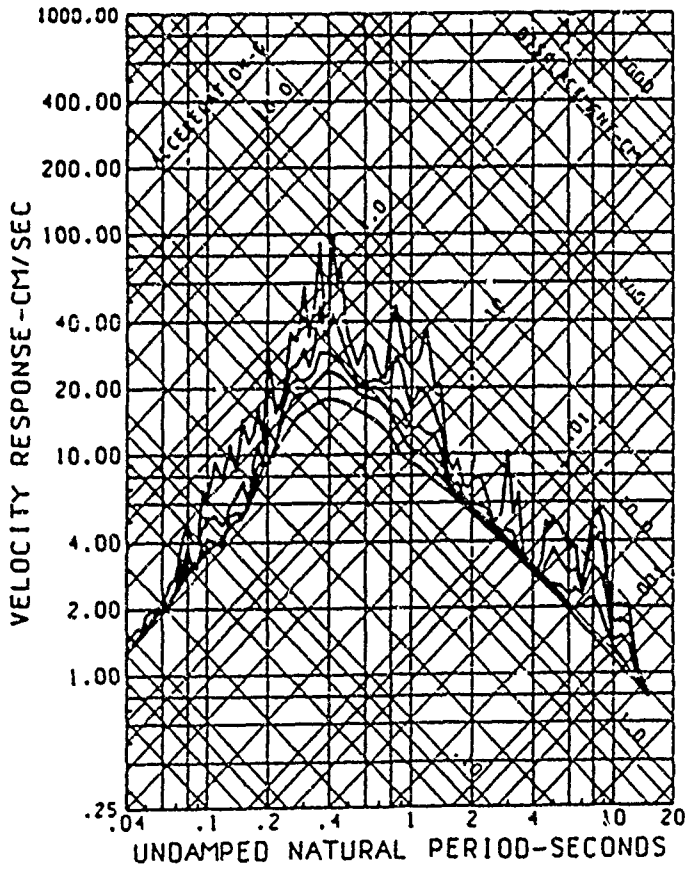
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

HELENA, MONTANA EARTHQUAKE

OCT 31, 1935 - 1138 MST

MON 1





USGS OF 78-941

SEISMIC ENGINEERING BRANCH/USGS

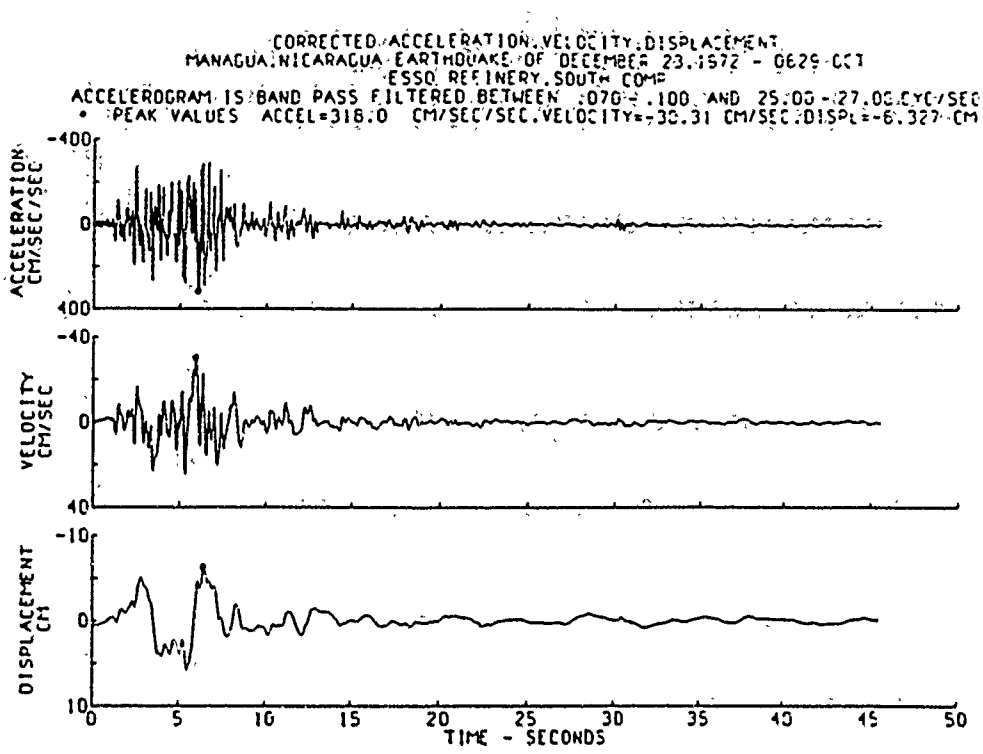
MANAGUA, ESSO. EAST

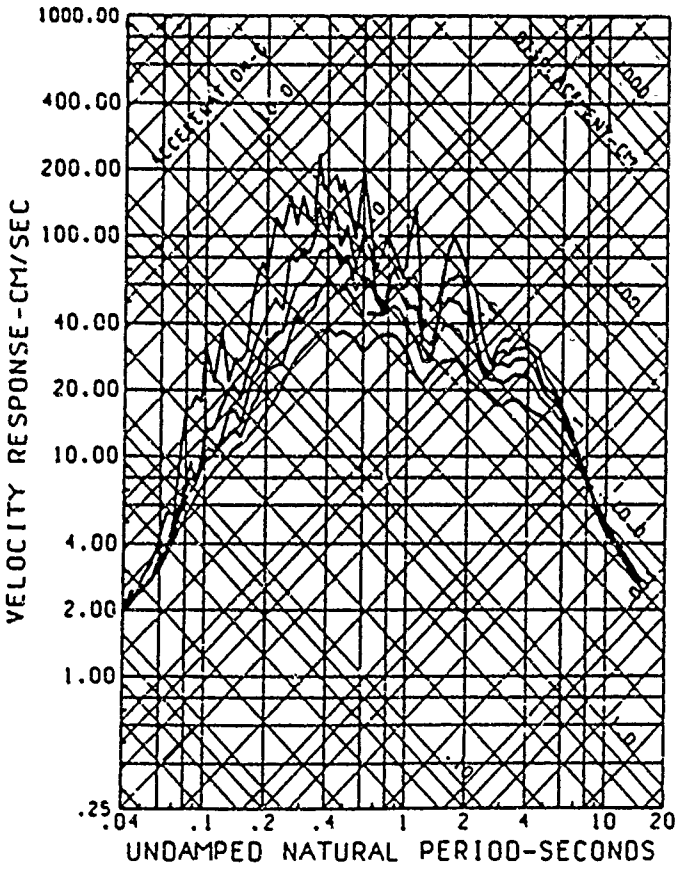
CRITICAL DAMPING

0.2.5.10.20 PERCENT

1/5/72, 0555AM

NIC 1





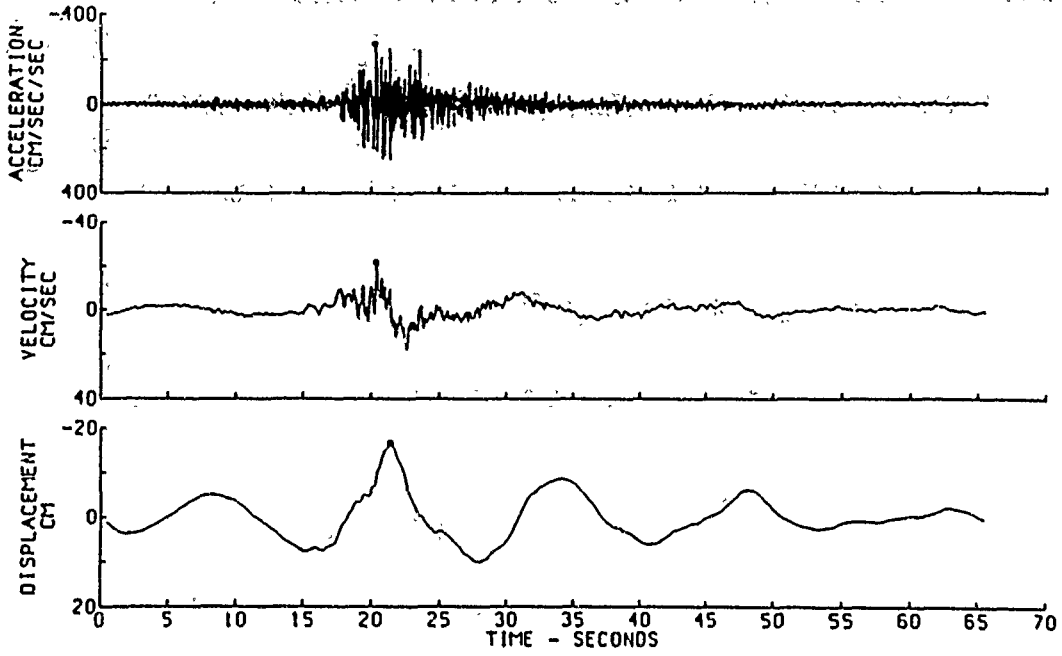
USGS OF 78-941

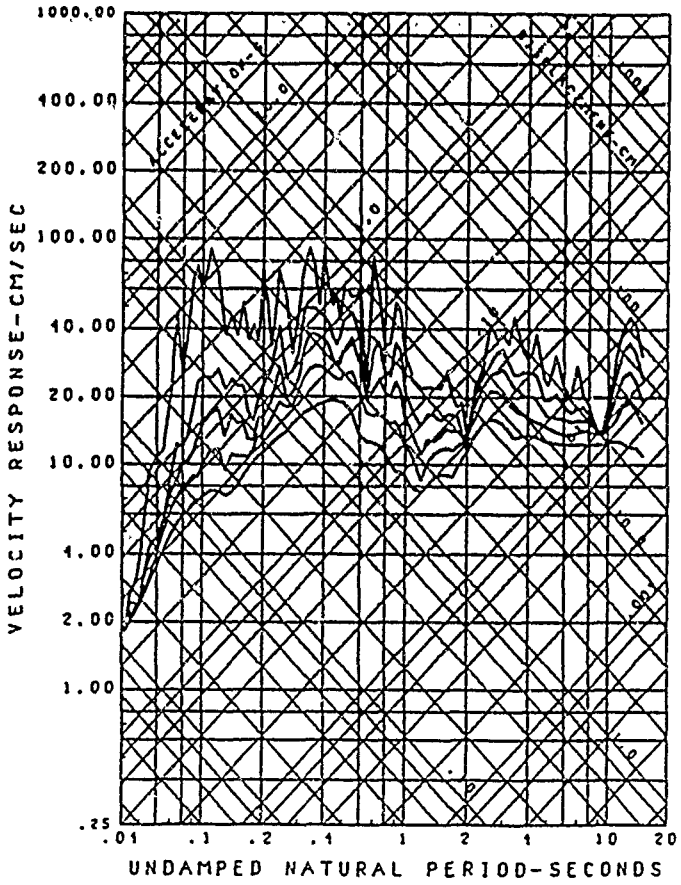
SEISMIC ENGINEERING
BRANCH/USGS
MANAGUA,ESSO SOUTH
CRITICAL DAMPING
0.2.5.10.20 PERCENT

12/23/72.0629GCT

NIC 3

CORRECTED ACCELERATION, VELOCITY, DISPLACEMENT
LIMA, PERU EARTHQUAKE OF OCTOBER 17, 1966
INSTITUTO GEOFISICO DEL PERU, N08E COMP
ACCELEROGRAM IS BAND PASS FILTERED BETWEEN .050 - .070 AND 25.00 - 27.00 CYC/SEC
• PEAK VALUES ACCEL=-269.3 CM/SEC/SEC, VELOCITY=-21.60 CM/SEC, DISPL=-16.60 CM



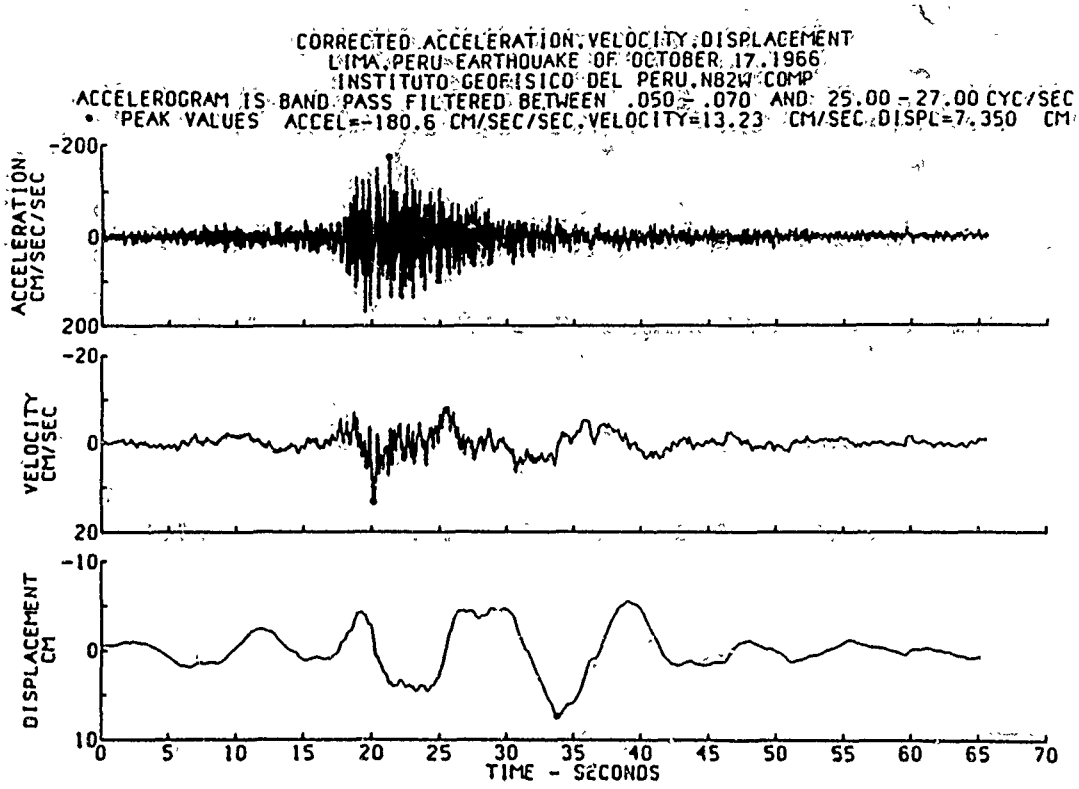


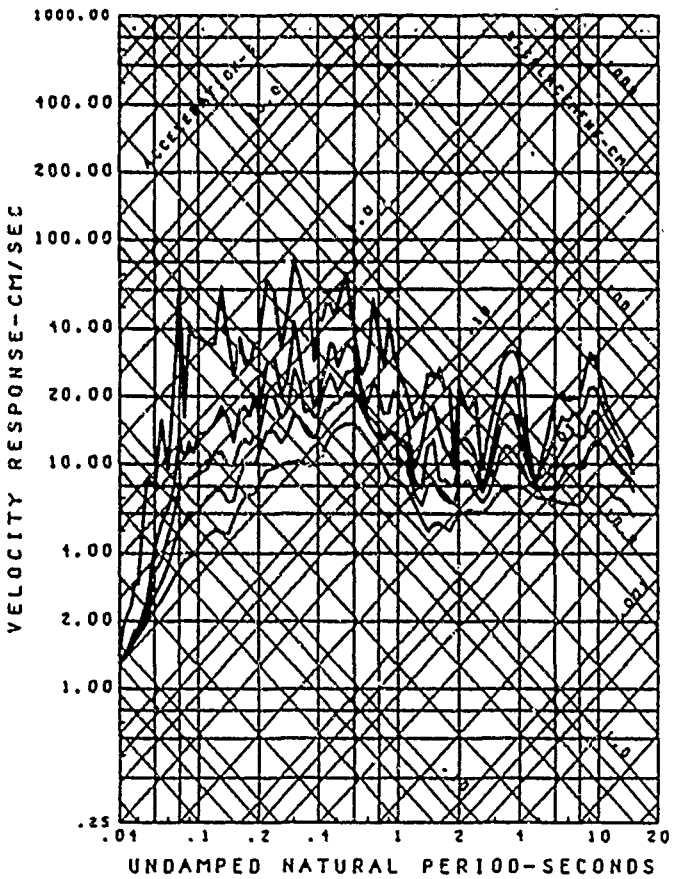
USGS OF 77-587

SEISMIC ENGINEERING
BRANCH/USGS
N08E COMP
CRITICAL DAMPING
0, 2, 5, 10, 20 PERCENT

LIMA, PERU, INST GEOF.
10/17/66

PER 1





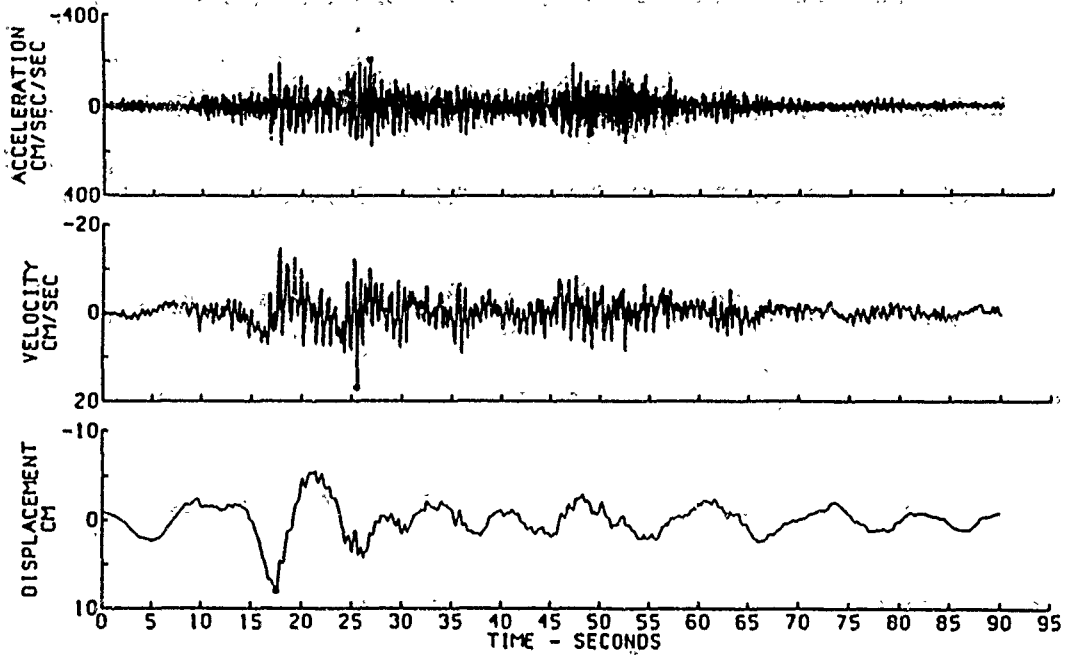
USGS OF 77-587

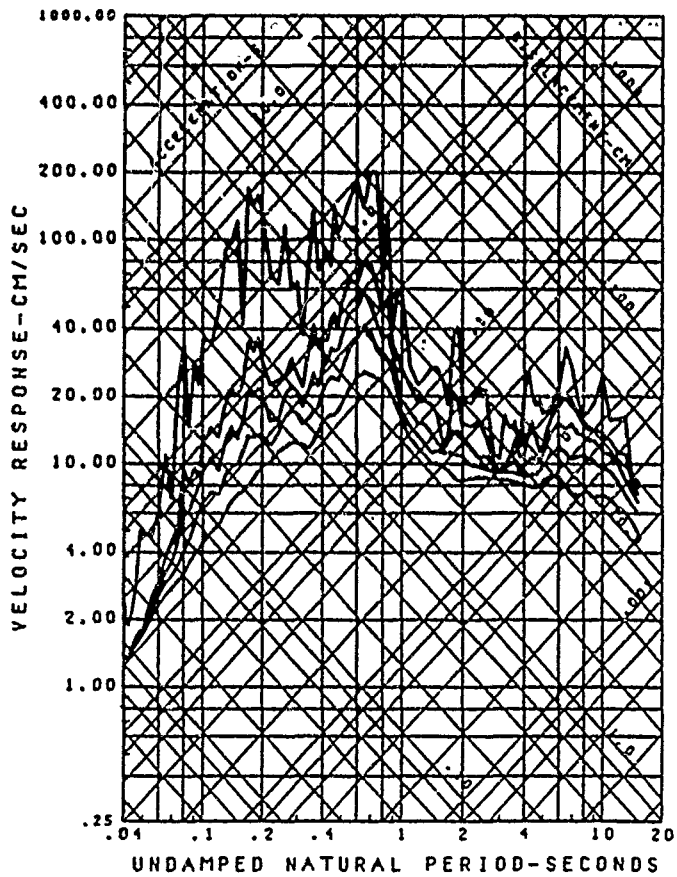
SEISMIC ENGINEERING
BRANCH/USGS
N82W COMP
CRITICAL DAMPING
0,2,5,10,20 PERCENT

LIMA,PERU,INST GEOF.
10/17/66

PER 2

CORRECTED ACCELERATION,VELOCITY,DISPLACEMENT
LIMA,PERU EARTHQUAKE OF OCTOBER 3,1974 - 1421 GCT
CASA DR, HUACO,T COMP
ACCELEROGRAM IS BAND PASS FILTERED BETWEEN .050 - .070 AND 25.00 - 27.00 CYC/SEC
PEAK VALUES ACCEL=-207.1 CM/SEC/SEC,VELOCITY=16.94 CM/SEC,DISPL=8.030 CM



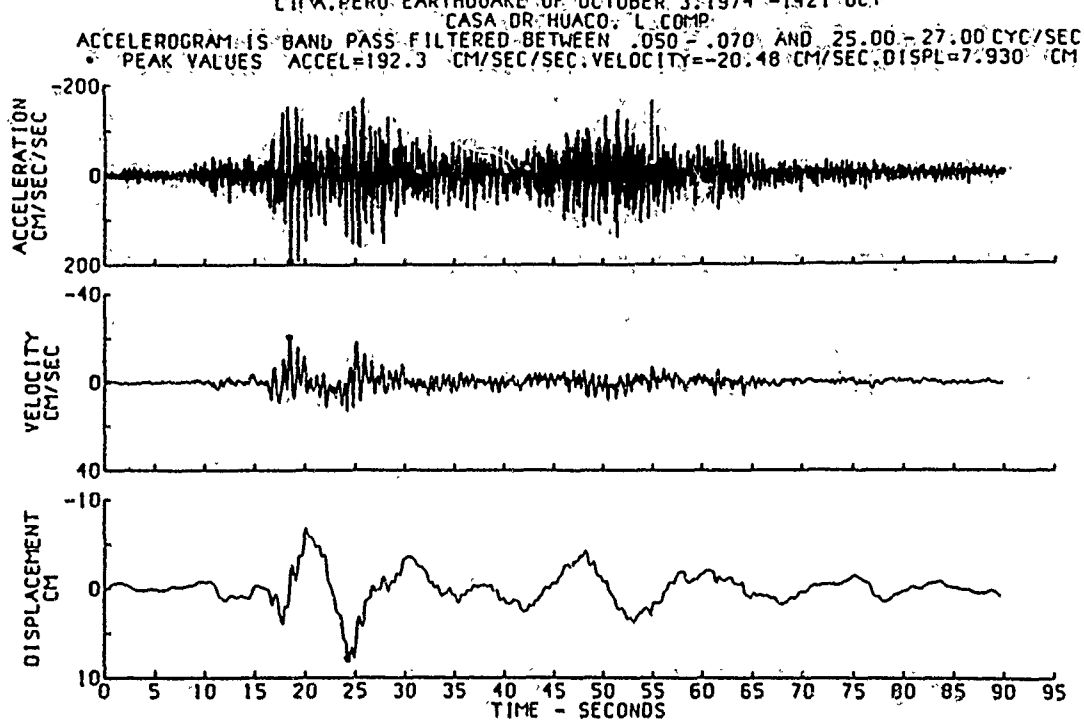


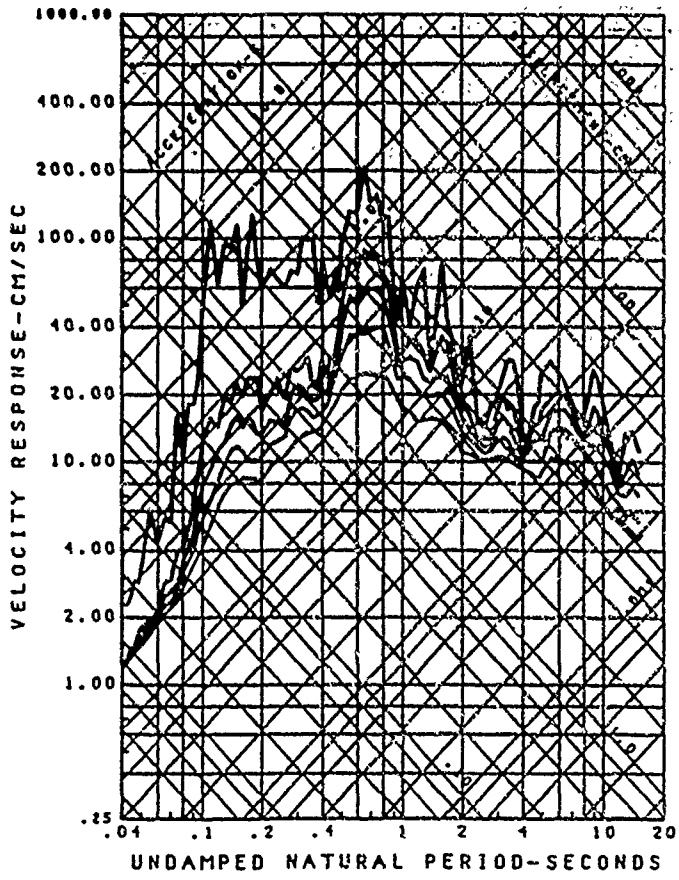
USGS OF 77-587

SEISMIC ENGINEERING
BRANCH/USGS
1421GCT,T COMP
CRITICAL DAMPING
0,2,5,10,20 PERCENT

LIMA,PERU,CASA DR HUACO
10/3/74

PER 3



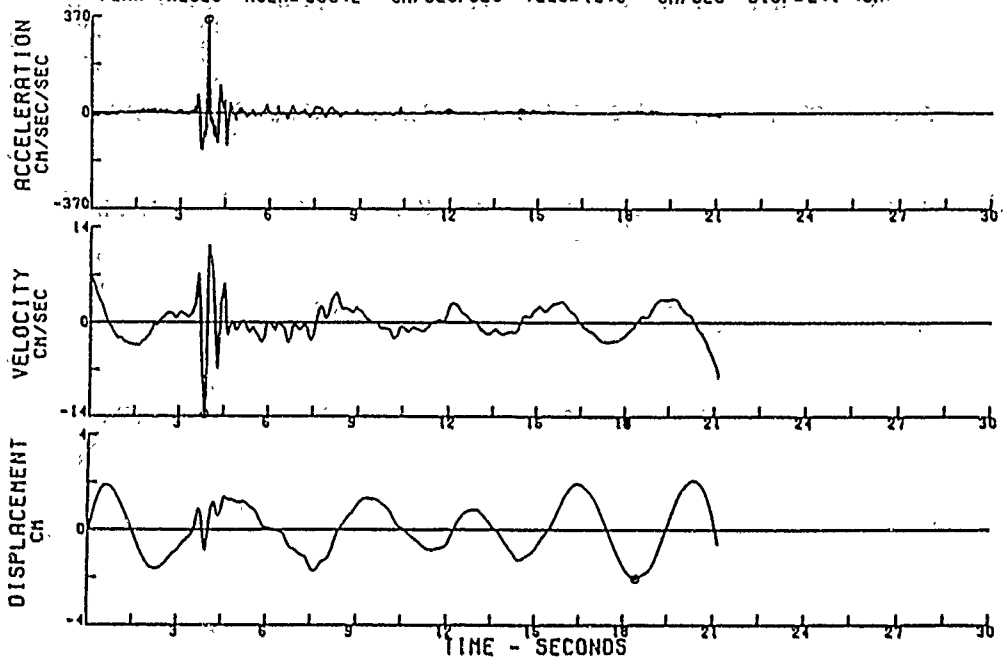


USGS OF 77-587

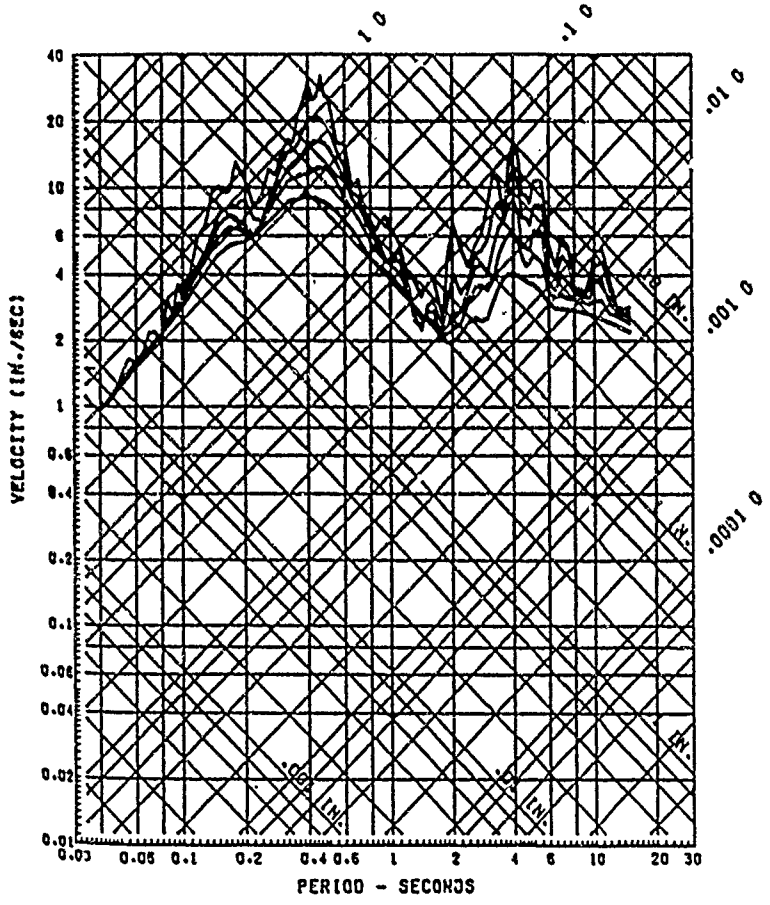
SEISMIC ENGINEERING
BRANCH/USGS
1421GCT, L COMP
CRITICAL DAMPING
0, 2, 5, 10, 20 PERCENT

LIMA, PERU, CASA DR HUACO
10/3/74

PER 4



ROC VOL I, PT B



ROC VOL I, PT D

TQ7604I4-026 HANCHIU

COMP N90W

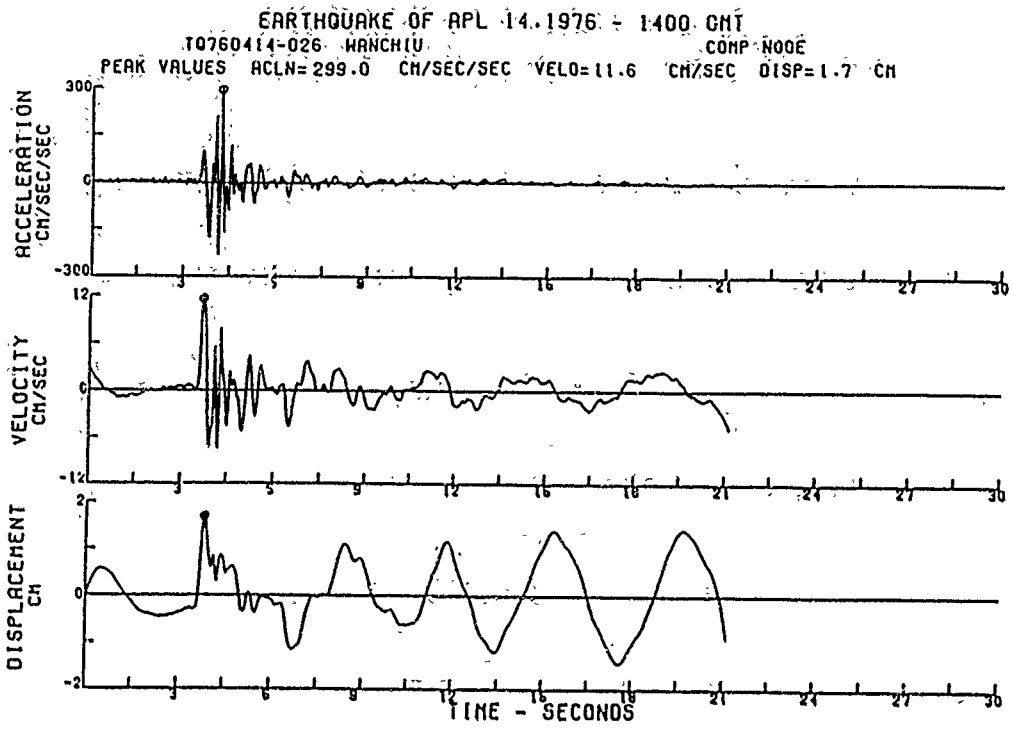
1400 GMT 8

DAMPING VALUES ARE

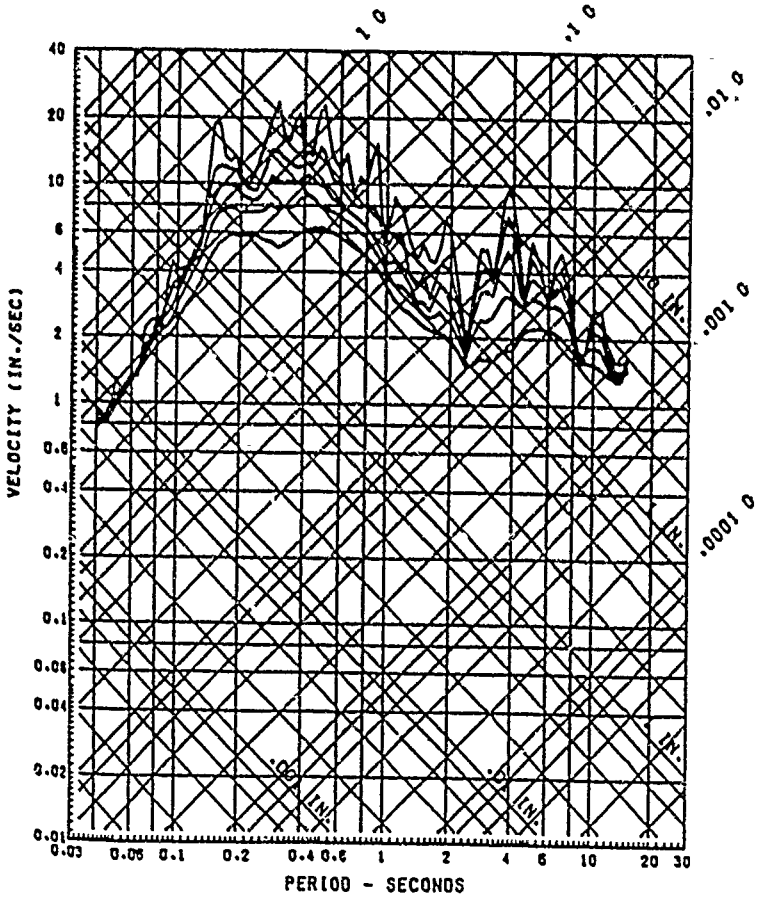
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

EARTHQUAKE OF APL 14,1976

ROC 1



ROC VOL I, PT B



ROC VOL I, PT D

TQ760414-026 HANCHIU

COMP NOOE

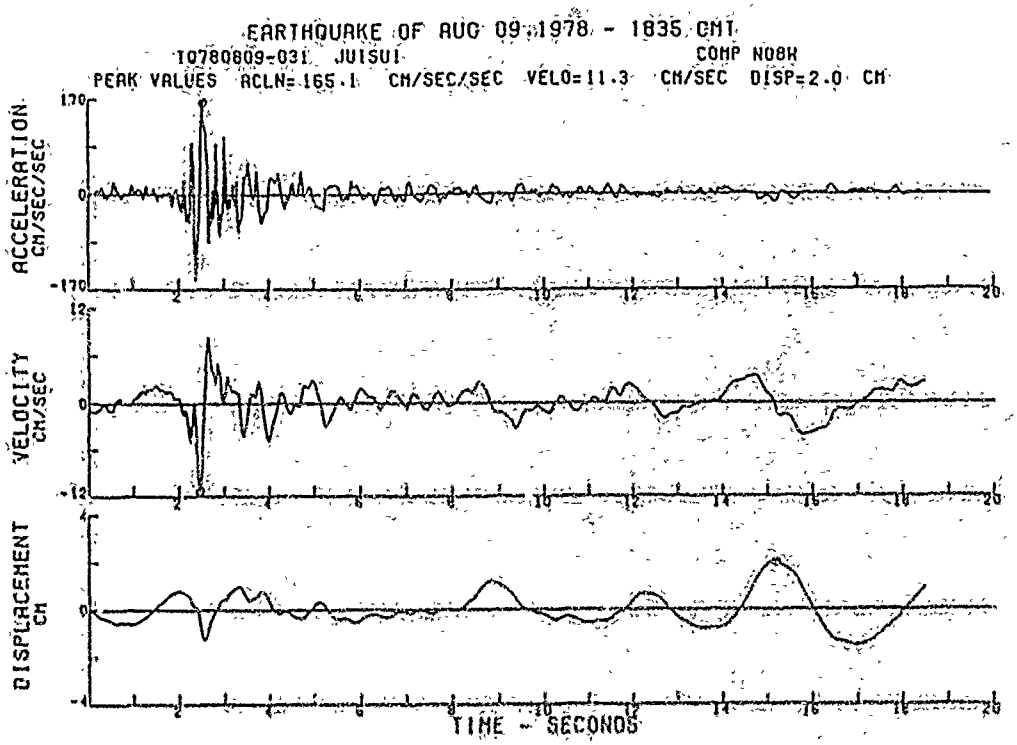
1400 GMT 6

DAMPING VALUES ARE

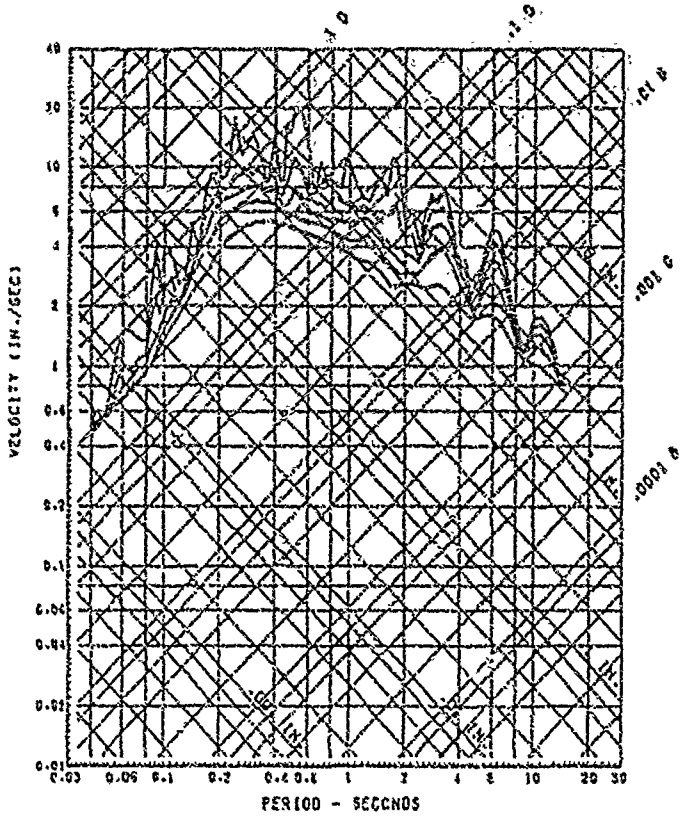
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

EARTHQUAKE OF APL 14,1976

ROC 2



ROC VOL 1 PT B

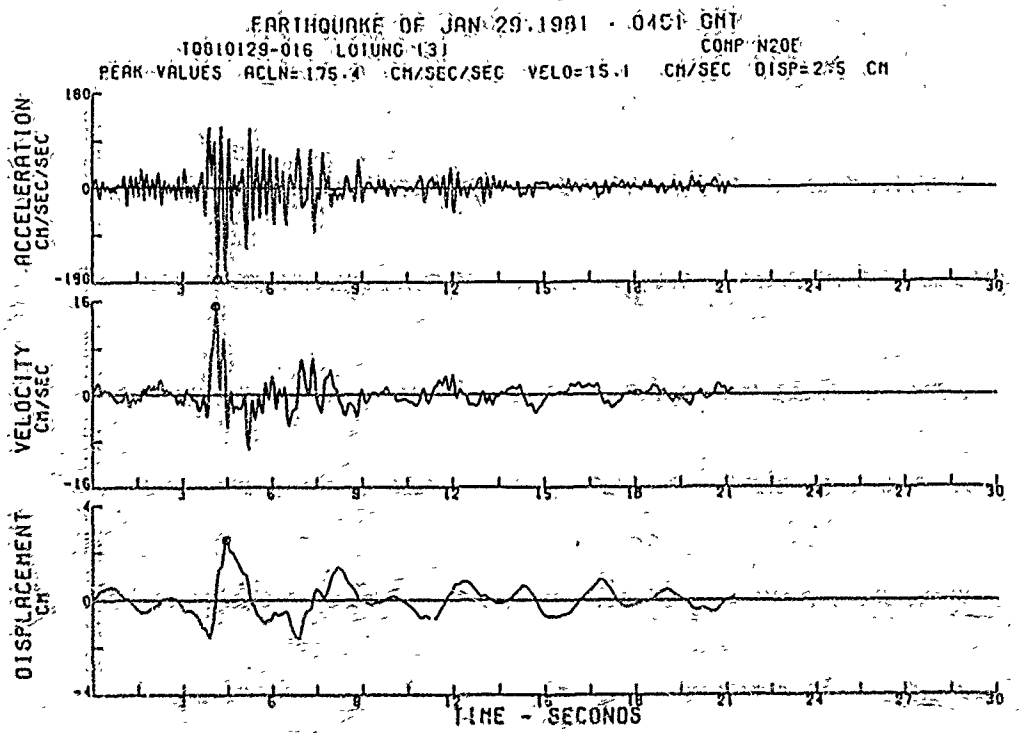


ROC VOL 1 PT D

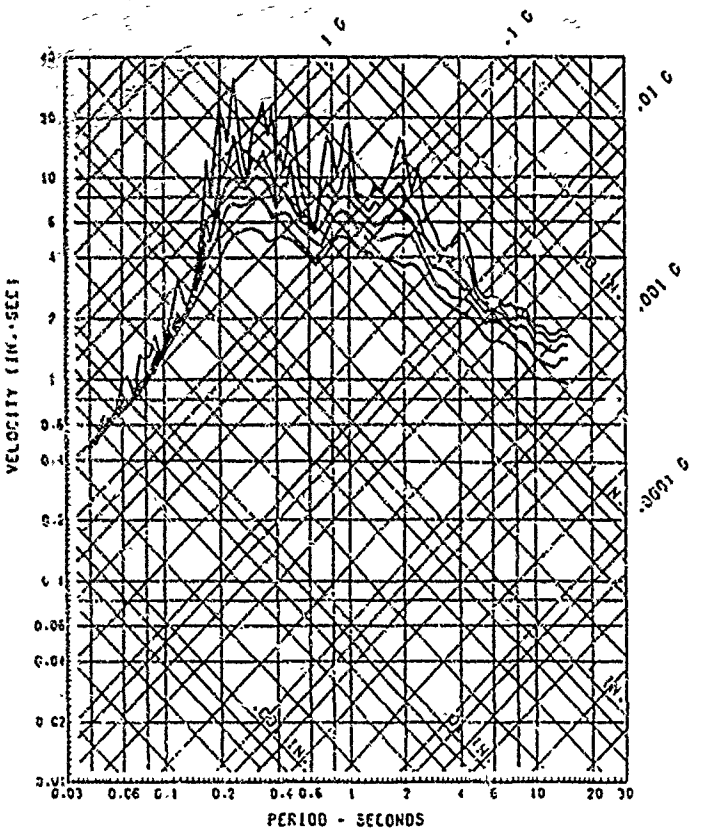
10780809-031 JUISUI
COMP N08W
1835 GMT
DAMPING VALUES ARE
0, 2, 5, 10 AND 20
PERCENT OF CRITICAL

EARTHQUAKE OF AUG 09,1978

ROC 4



ROC VOL 2 PT B

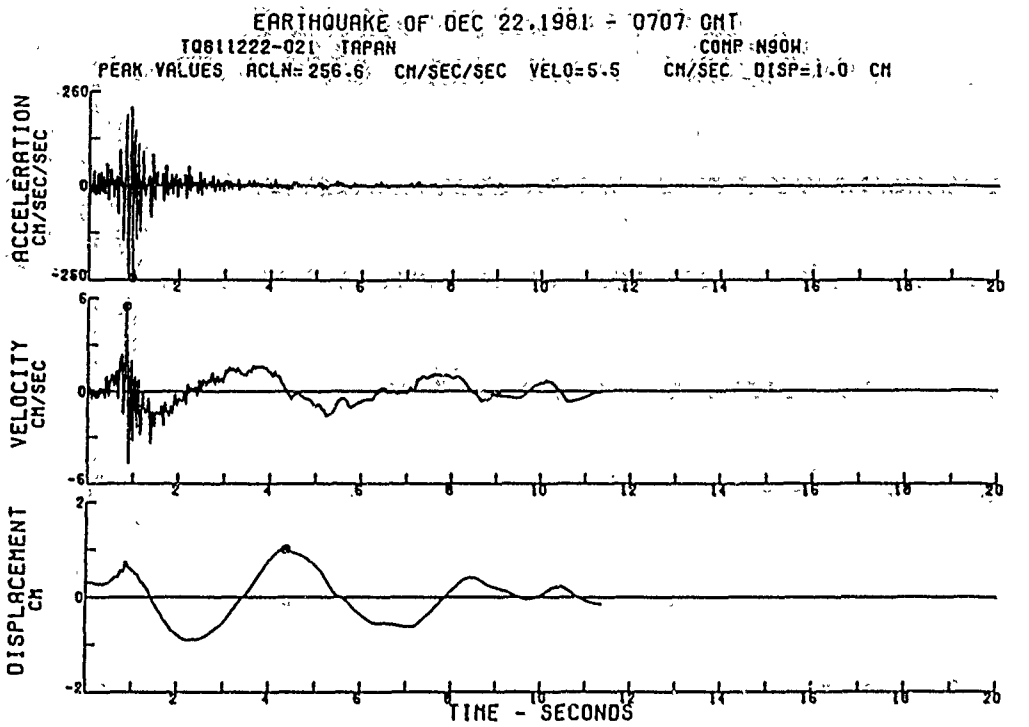


ROC VOL 2 PT D

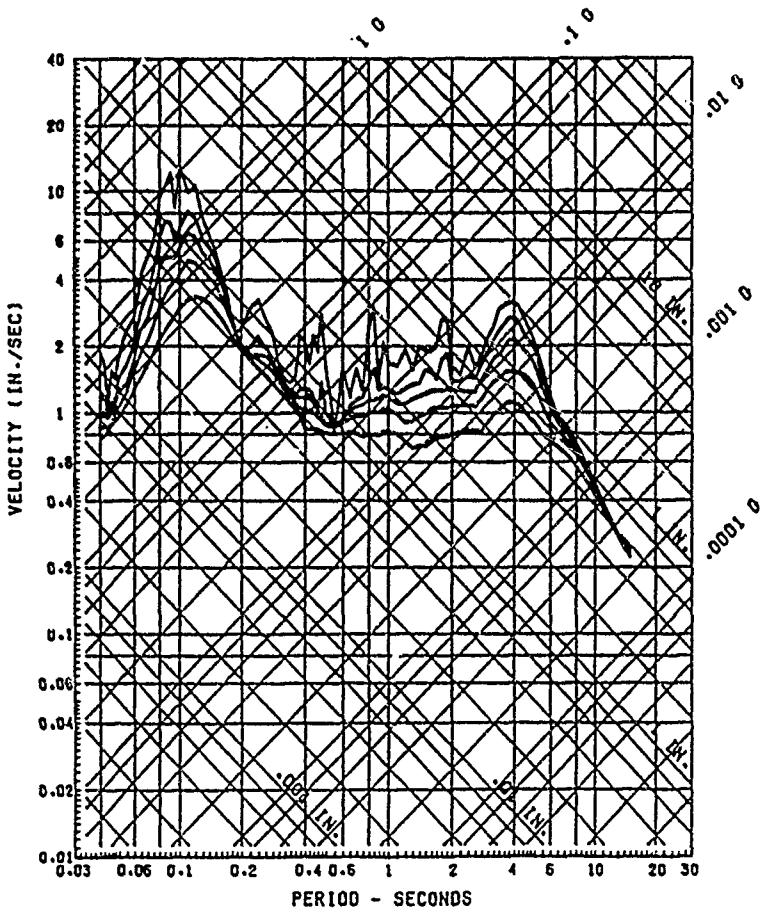
TU810129-016 LOTUNG (3)
COMP N20E
0451 GMT
DAMPING VALUES ARE
0, 2, 5, 10 AND 20
PERCENT OF CRITICAL

EARTHQUAKE OF JAN 29,1981

ROC 7



ROC VOL 3, PT B



ROC VOL 3, PT D

TQ811222-021 TAPAN

COMP N90W

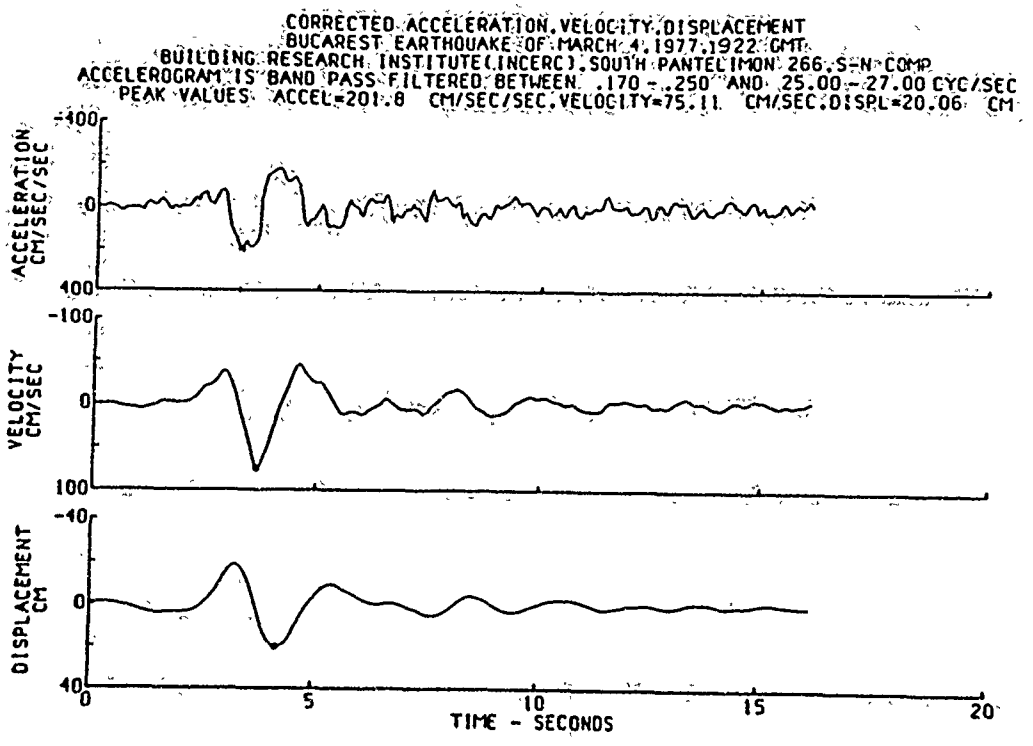
0707 GMT

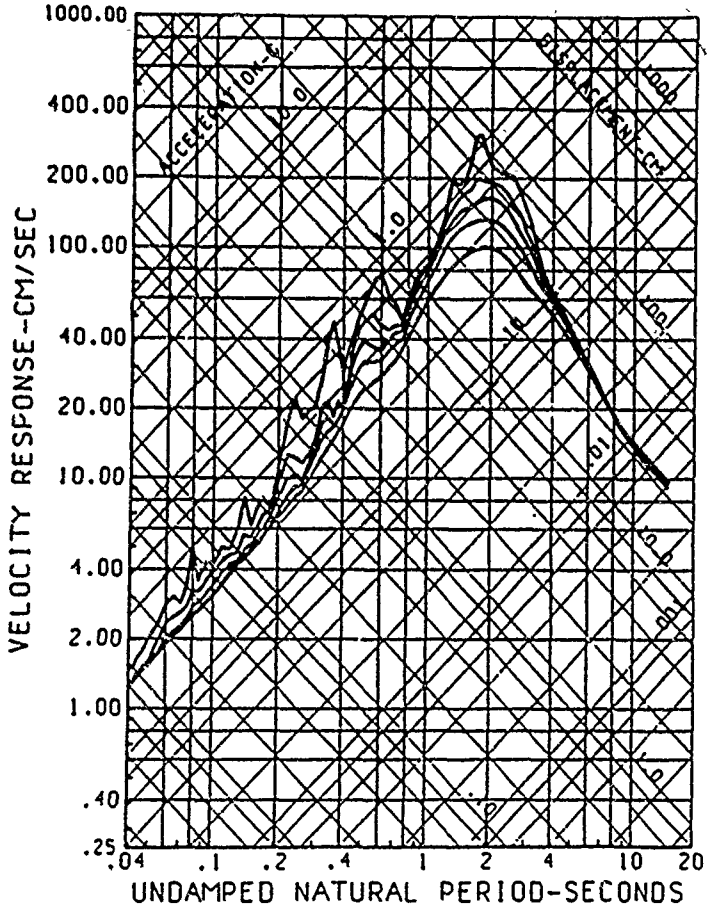
DAMPING VALUES ARE

0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

EARTHQUAKE OF DEC 22,1981

ROC 8



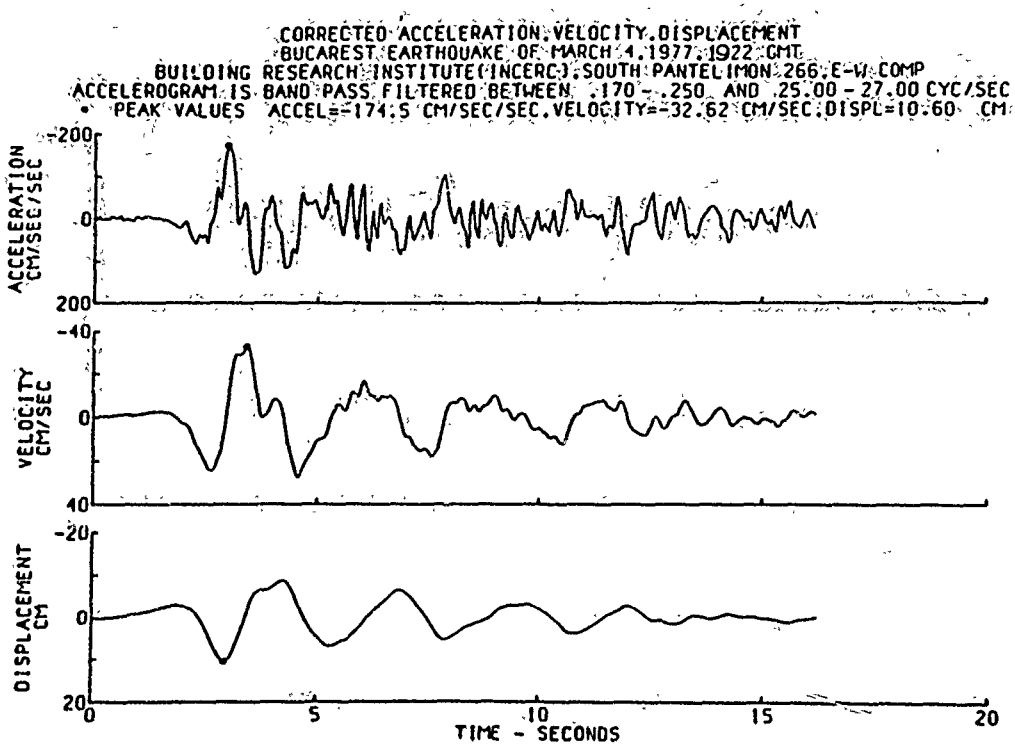


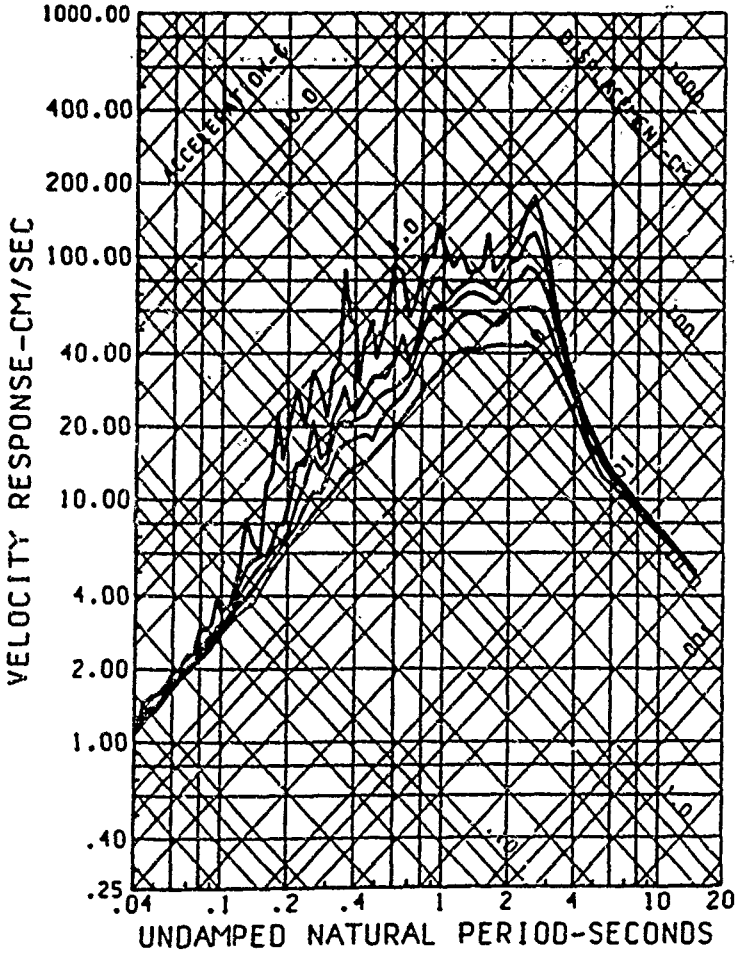
USGS OF 78-1022

SEISMIC ENGINEERING
BRANCH/USGS
1922GMT, S-N
CRITICAL DAMPING
0.2.5.10.20 PERCENT

BUCAREST, (INCERC)
3/4/77

ROM 1



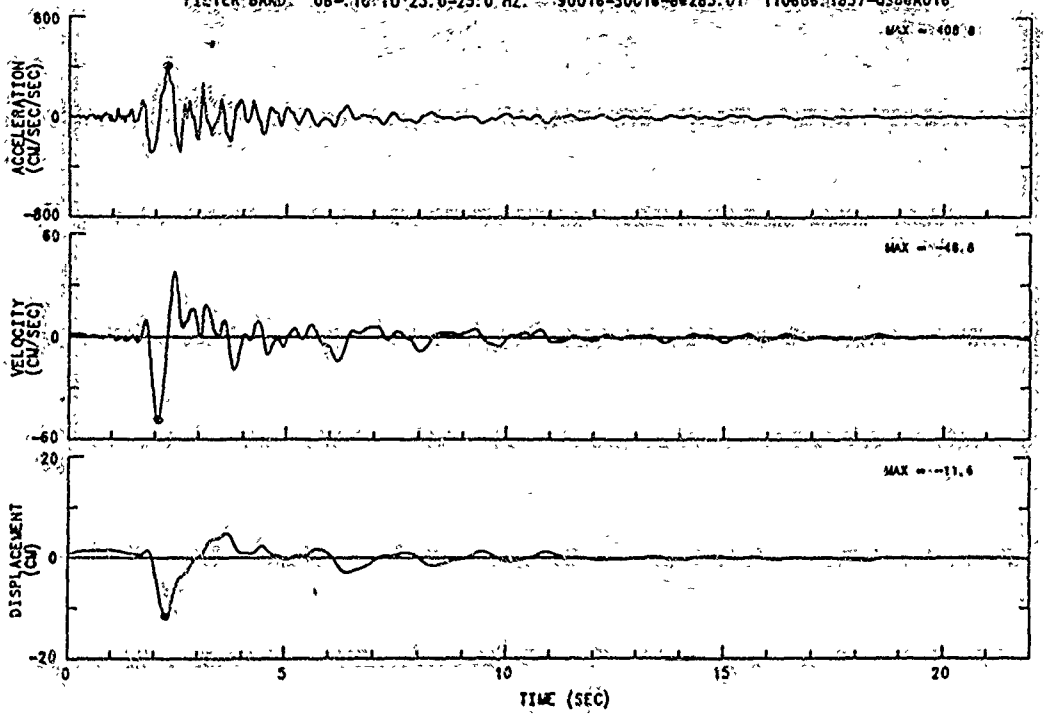


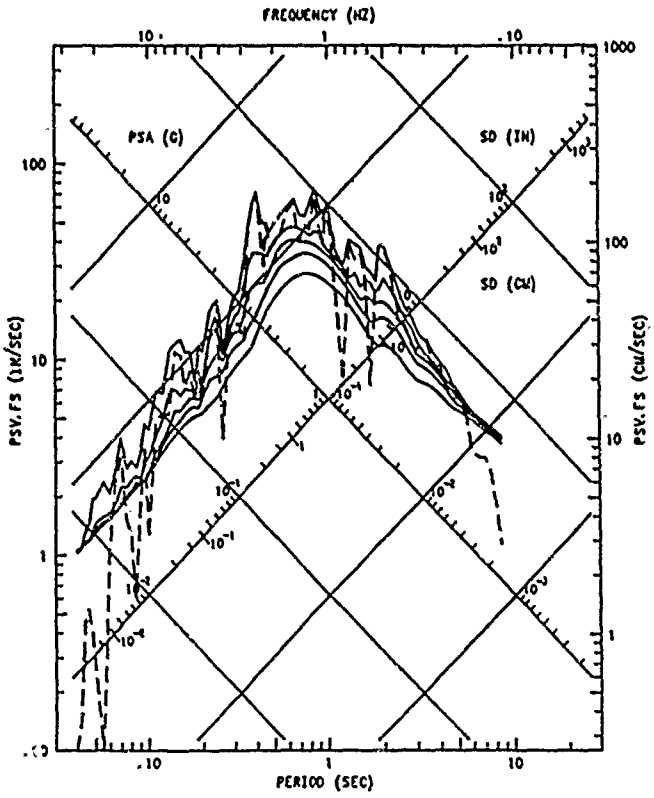
USGS OF 78-1022

SEISMIC ENGINEERING
BRANCH/USGS
1922GMT,E-W
CRITICAL DAMPING
0.2.5.10.20 PERCENT

BUCAREST,(INCERC)
3/4/77

ROM 2





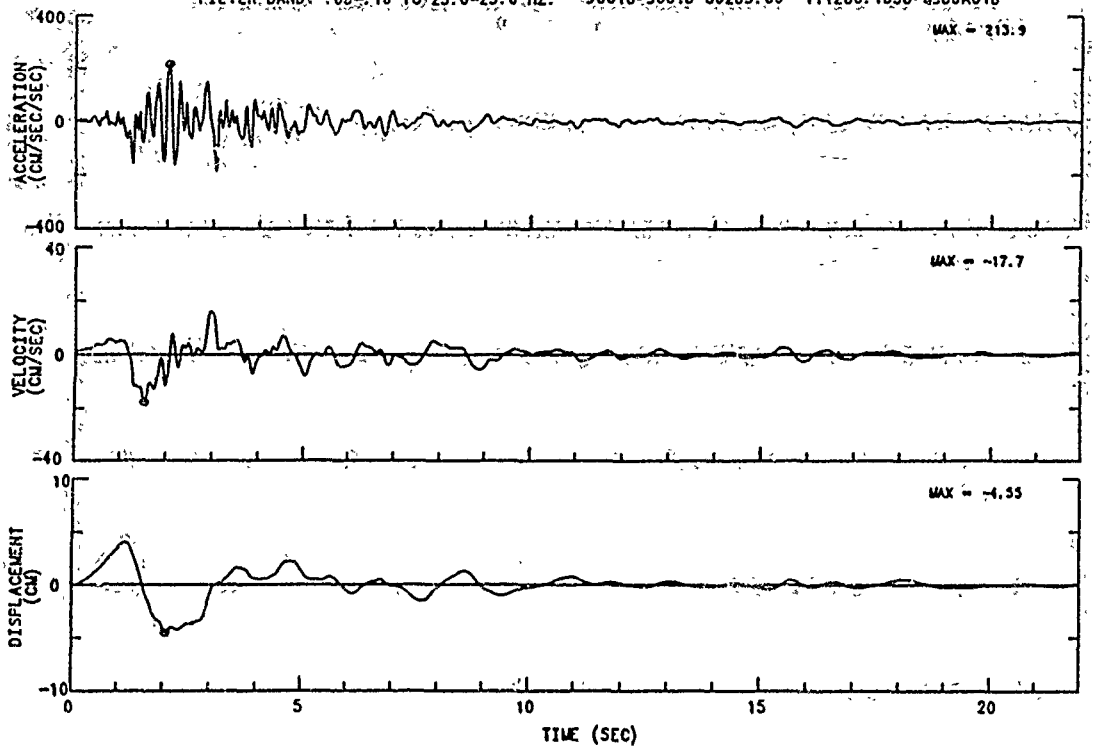
CDMG OSMS 86-07

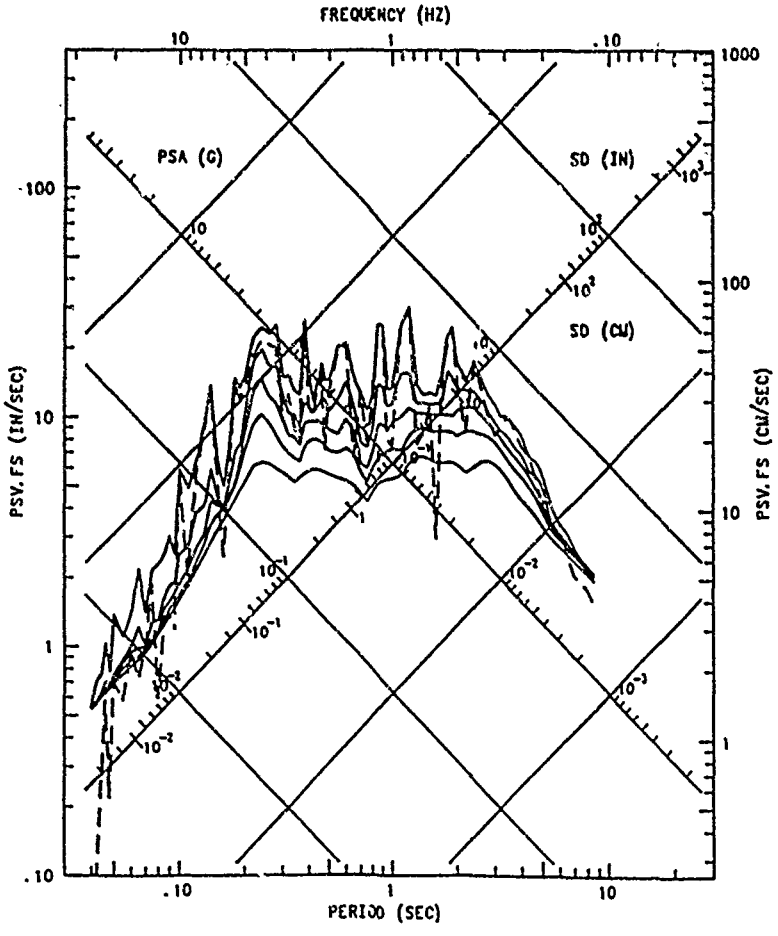
CENTRO AMERICANA UNIV. -(NIVEL/FLOOR: 1)
CHN 3: 90 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
90016-S0016-86283.01
110686.1907-QS86A016
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SAN SALVADOR EARTHQUAKE
OCTOBER 10, 1986 17:49 GMT

SAL 9

SAN SALVADOR EARTHQUAKE OCTOBER 10, 1986, 17:49 GMT
HOTEL SHERATON - (NIVEL/FLOOR: 1) CHN 1: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .08-.16 TO 23.0-25.0 HZ. 90018-S0018-86283.06 111286.1838-QS86A018



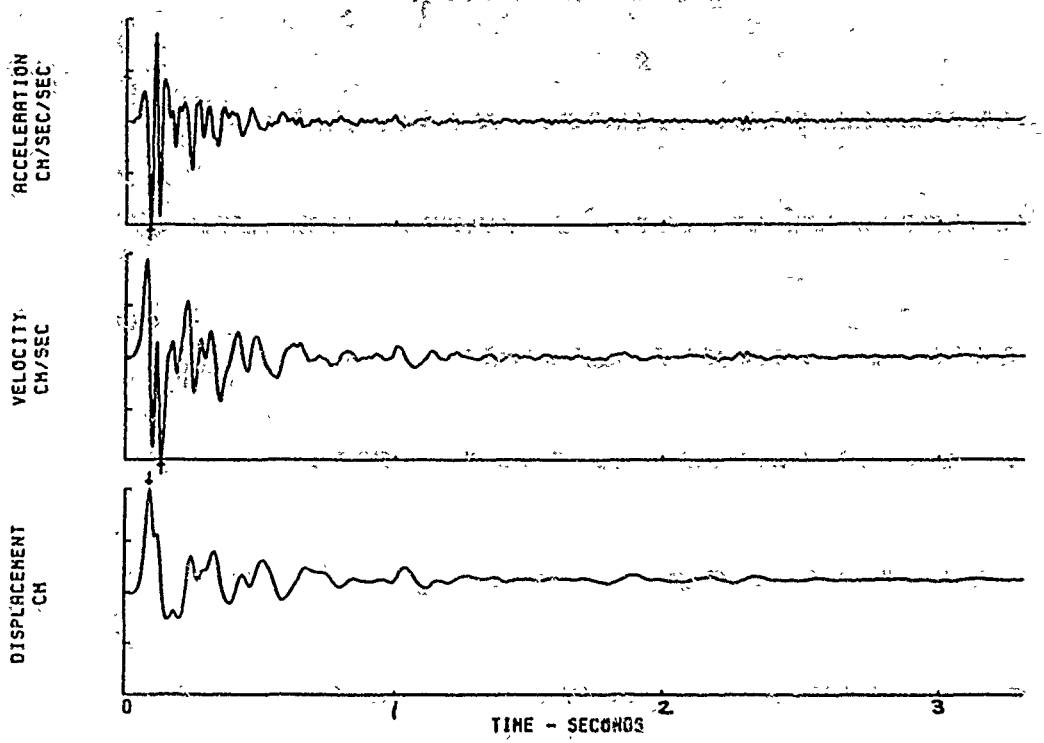


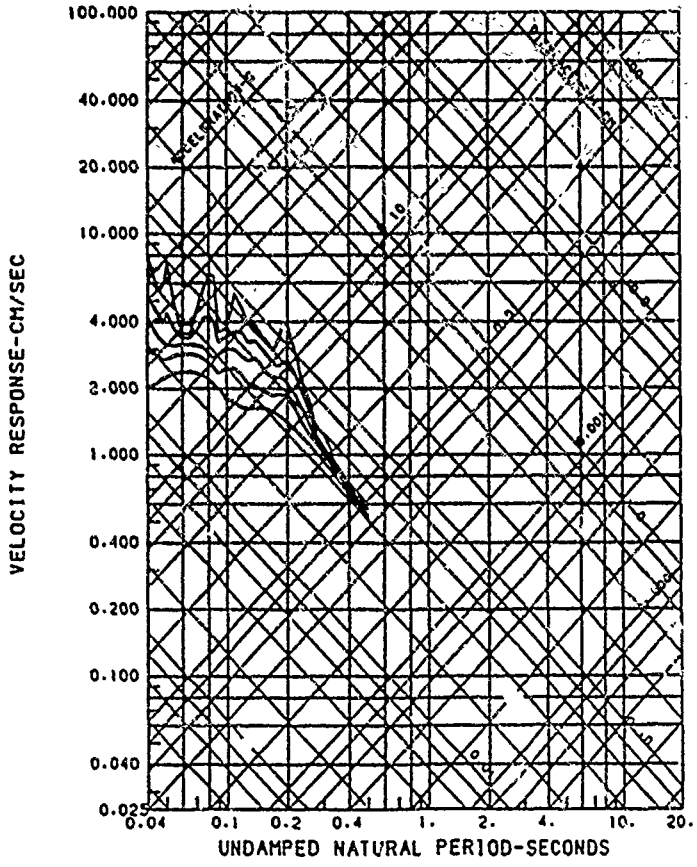
CDMG OSMS 86-07

HOTEL SHERATON - (NIVEL/FLOOR: 1)
CHN 1: 0 DEG
ACCELEROGRAM BANDPASS-FILTERED WITH
RAMPS AT .08-.16 TO 23.0-25.0 HZ.
90018-S0018-86283.06
111286.1848-QS86A018
—— RESPONSE SPECTRA: PSV, PSA & SD
— — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

SAN SALVADOR EARTHQUAKE
OCTOBER 10, 1986 17:49 GMT

SAL 12





USGS OF 81-448

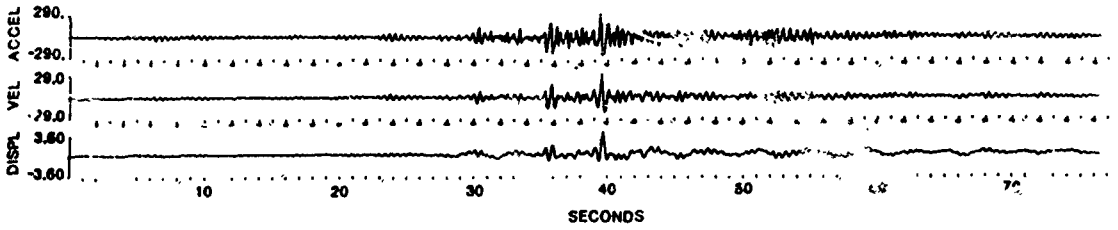
SEISMIC ENGINEERING BRANCH/USGS

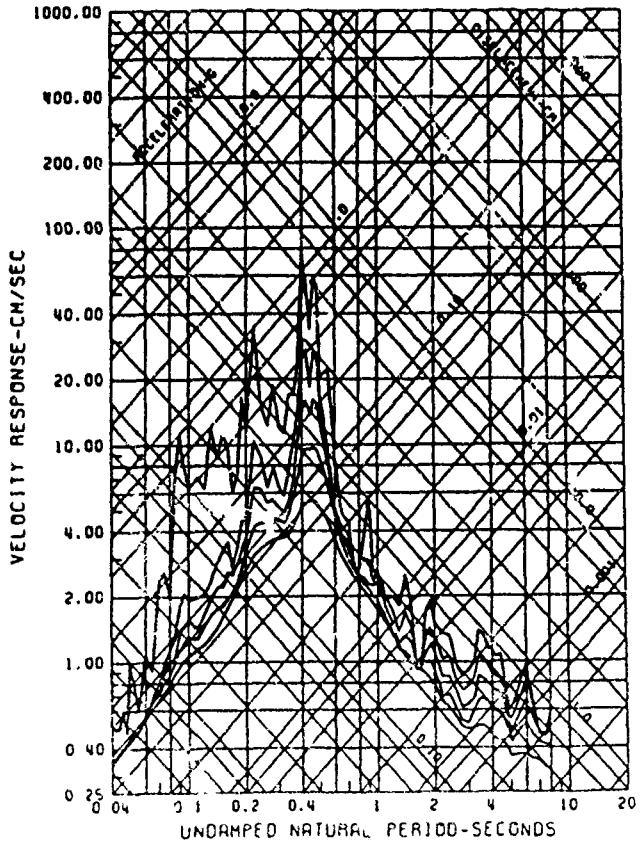
BAND PASSED FROM
N=1. 2.000 HZ TO N=2. 50.00 HZ
1023 UTC,90 DEG
CRITICAL DAMPING
0.2.5.10.20 PERCENT

MONTICELLO ABUT CEN CREST, 8/27/78

SC 2

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
BVE 80. PAPUA NEW GUINEA
LONG. (360°)
EARTHQUAKE OF MARCH 18, 1983 0905 UTC
BUTTERWORTH FILTER AT 0.20 HZ, ORDER 4
PEAK VALUES: ACCEL=283.51 CM/SEC/SEC, VELOCITY=28.64 CM/SEC, DISPL=3.56 CM





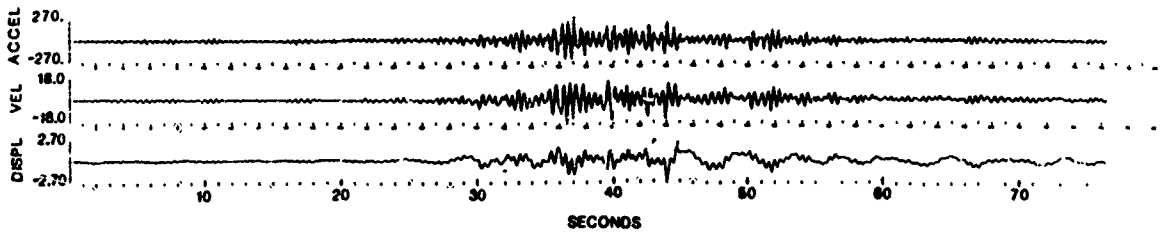
USGS OF 85-261

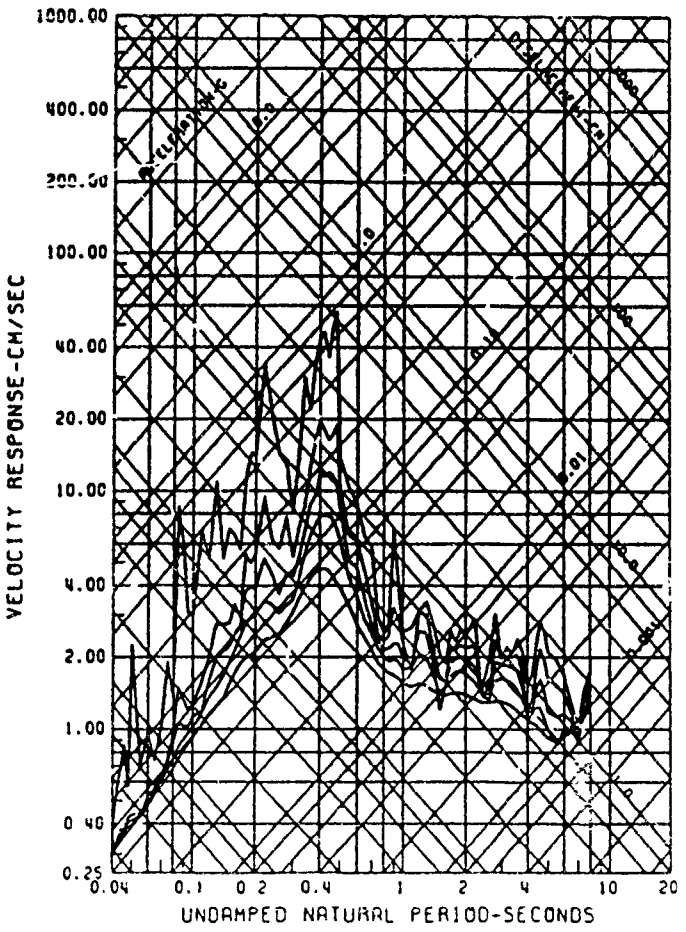
NATIONAL STRONG MOTION
DATA CENTER
0905UTC LONG.
FILTERS: BUTTERWORTH, ORDER 4
0.125 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

BVE 80, PAPUA NEW GUINEA
3/18/83

SOL 1

CORRECTED ACCELERATION, VELOCITY, AND DISPLACEMENT 200.00 SPS
BVE 80, PAPUA NEW GUINEA
TRAN. (90°)
EARTHQUAKE OF MARCH 18, 1983 0905 UTC
BUTTERWORTH FILTER AT 0.20 HZ, ORDER 4
PEAK VALUES: ACCEL=269.65 CM/SEC/SEC, VELOCITY=-17.91 CM/SEC, DISPL=-2.61 CM



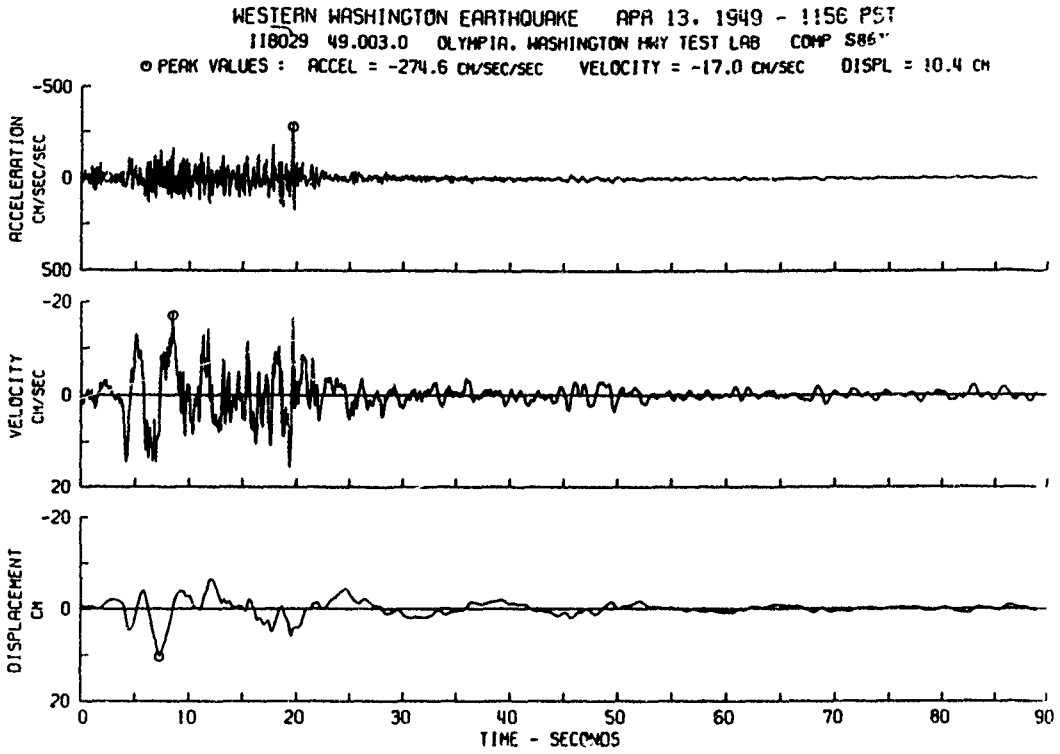


USGS OF 85-261

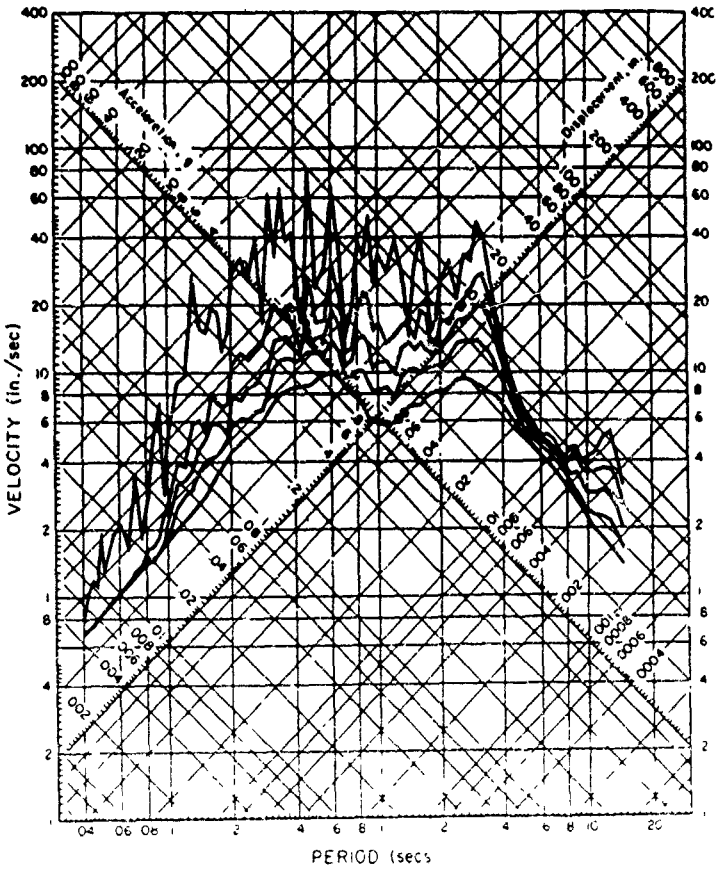
NATIONAL STRONG MOTION
DATA CENTER
0905 UTC TRAN.
FILTERS: BUTTERWORTH, ORDER 4
0.125 HZ; ANTIALIAS 50 - 100 HZ
CRITICAL DAMPING
0,2,5,10,20 PERCENT

BVE 80, PAPUA NEW GUINEA
3/18/83

SOL 2



CIT EERL 72-50

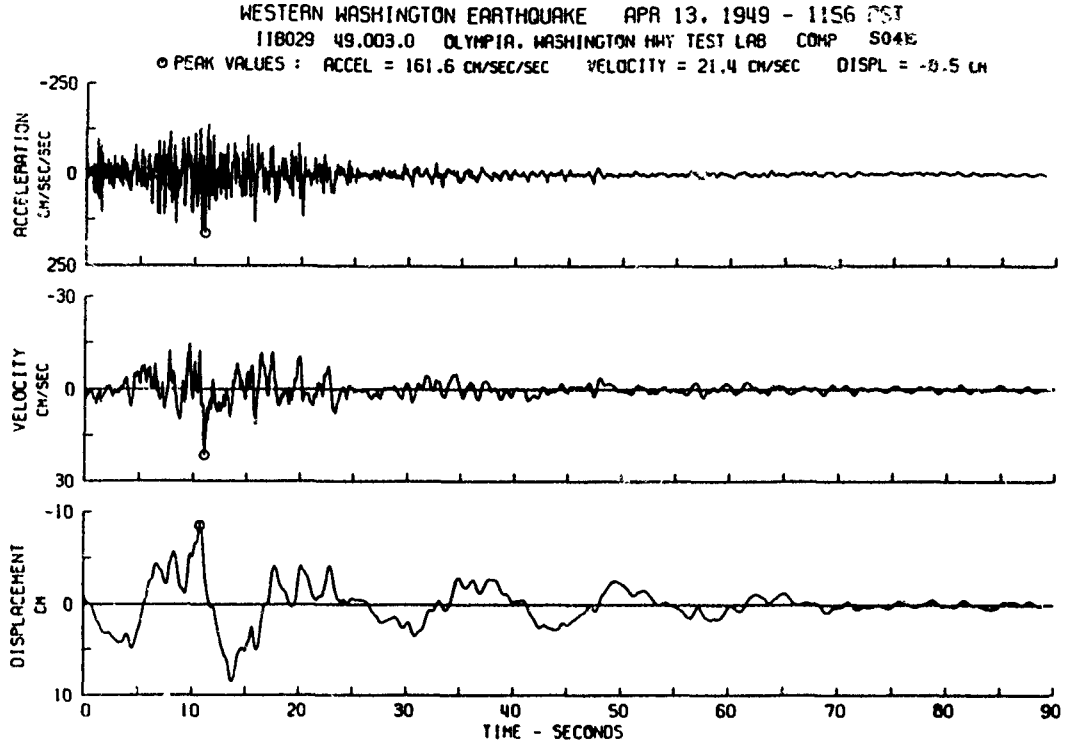


CIT EERL 73-80

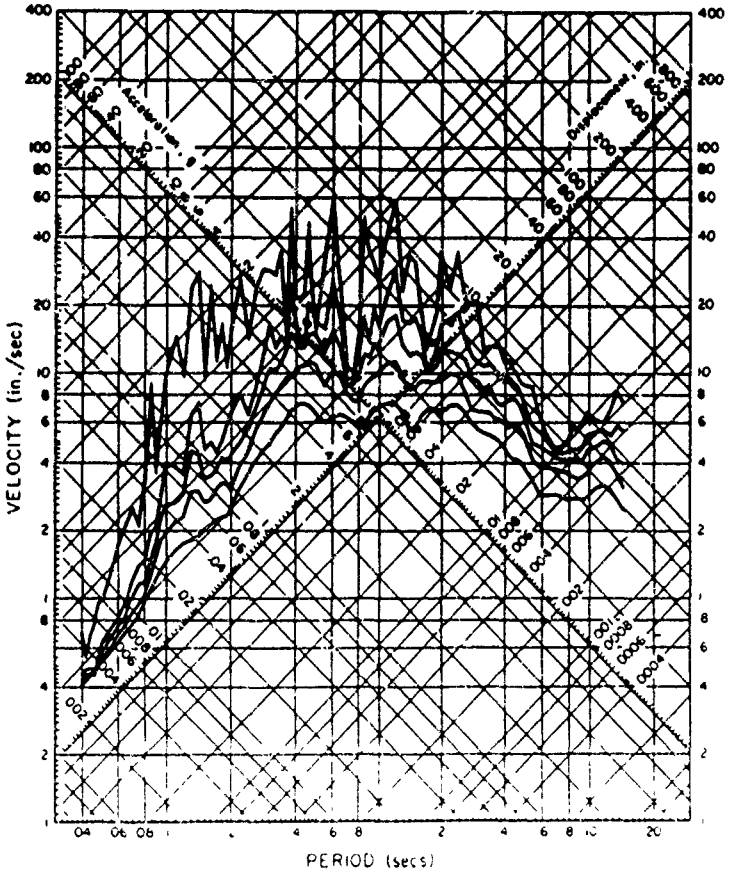
II8029 49.003.0 OLYMPIA, WASHINGTON
HWY TEST LAB COMP S86W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

WESTERN WASHINGTON EARTHQUAKE
APR 13, 1949 - 1156 PST

WAS 1



CIT EERL 72-50

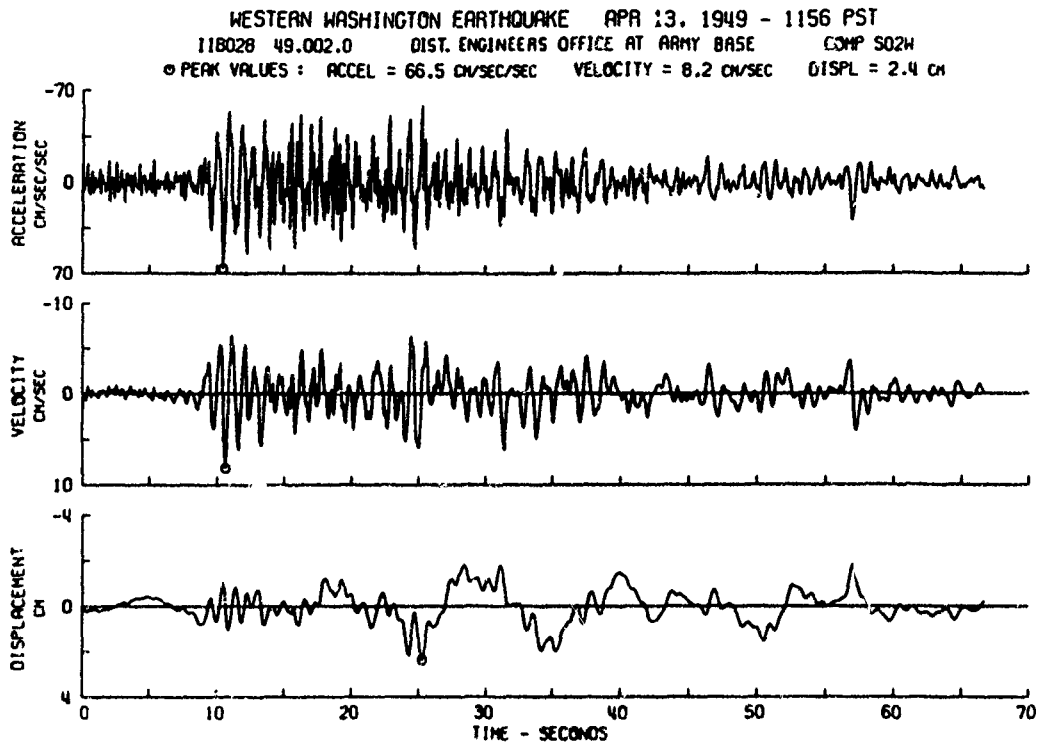


CIT EERL 73-80

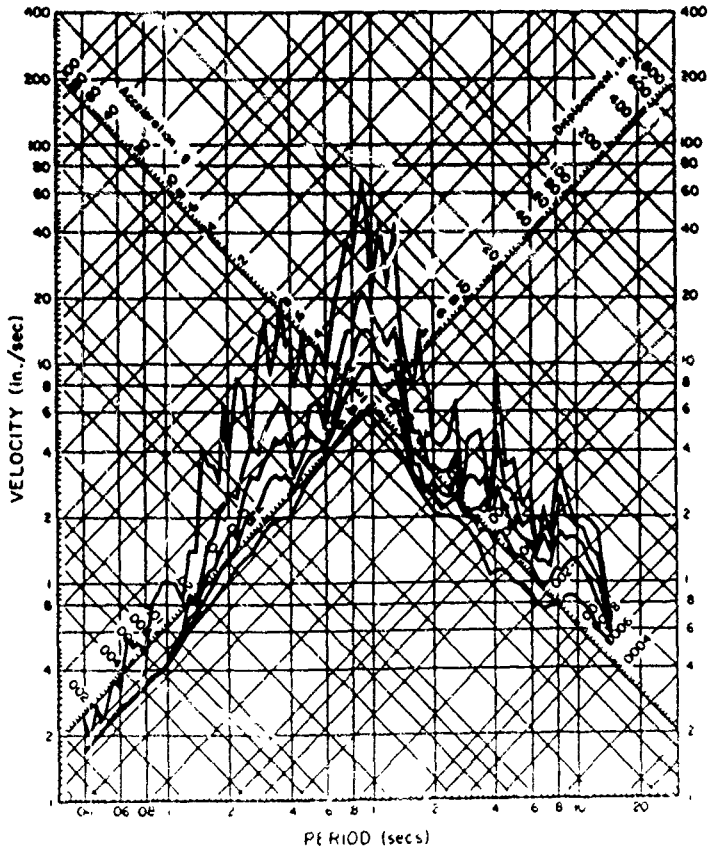
IIB029 49.003.0 OLYMPIA, WASHINGTON
HWY TEST LAB COMP S04E
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

WESTERN WASHINGTON EARTHQUAKE
APR 13, 1949 - 1156 PST

WAS 2



CIT EERL 72-50

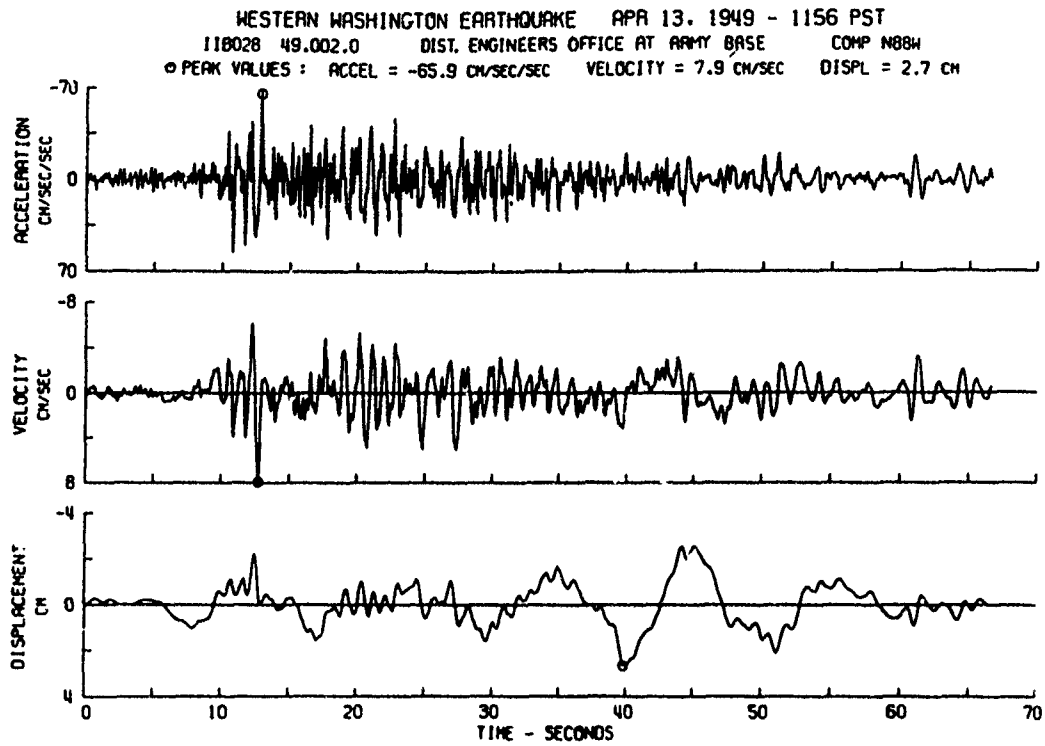


CIT EERL 73-80

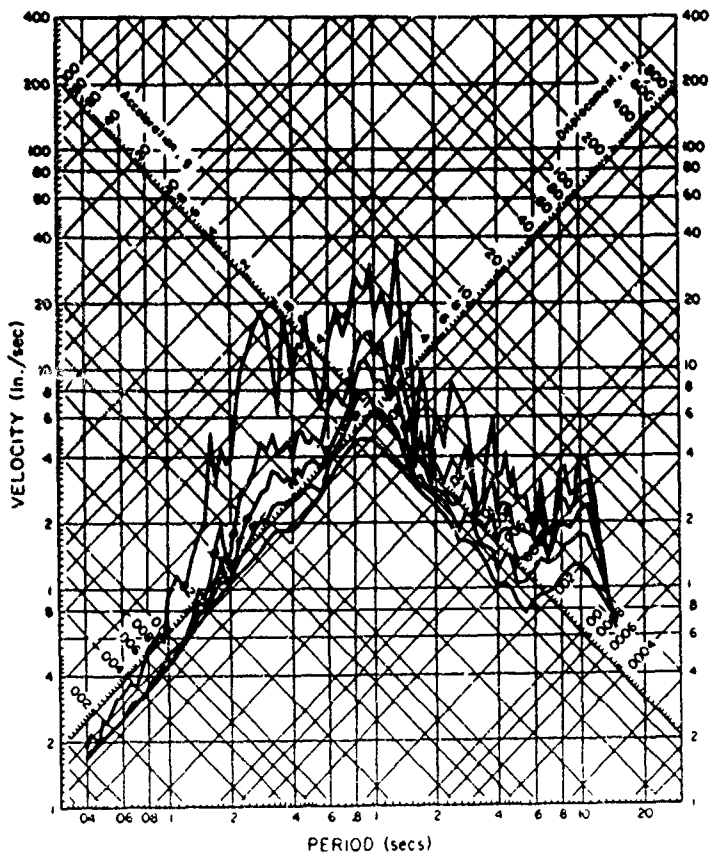
1118028 49.002.0 SEATTLE, WASH.
DIST ENGRS OFFC AT ARMY BASE COMP S02W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

WESTERN WASHINGTON EARTHQUAKE
APR 13, 1949 - 1156 PST

WAS 3



CIT EERL 73-80



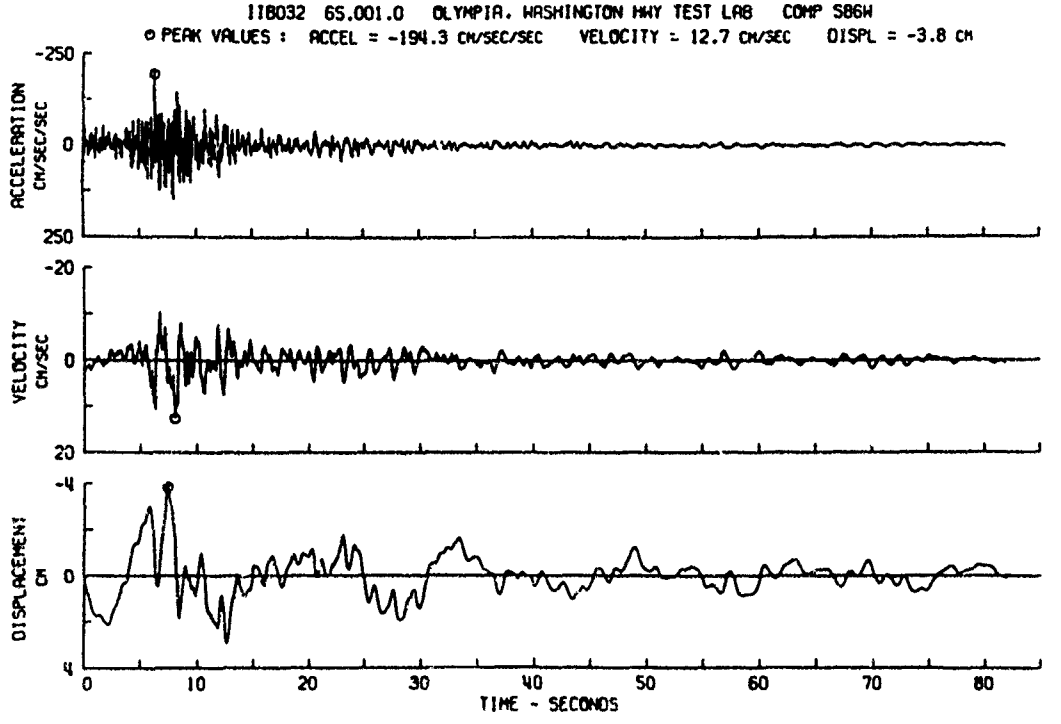
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DAMPING VALUES ARE
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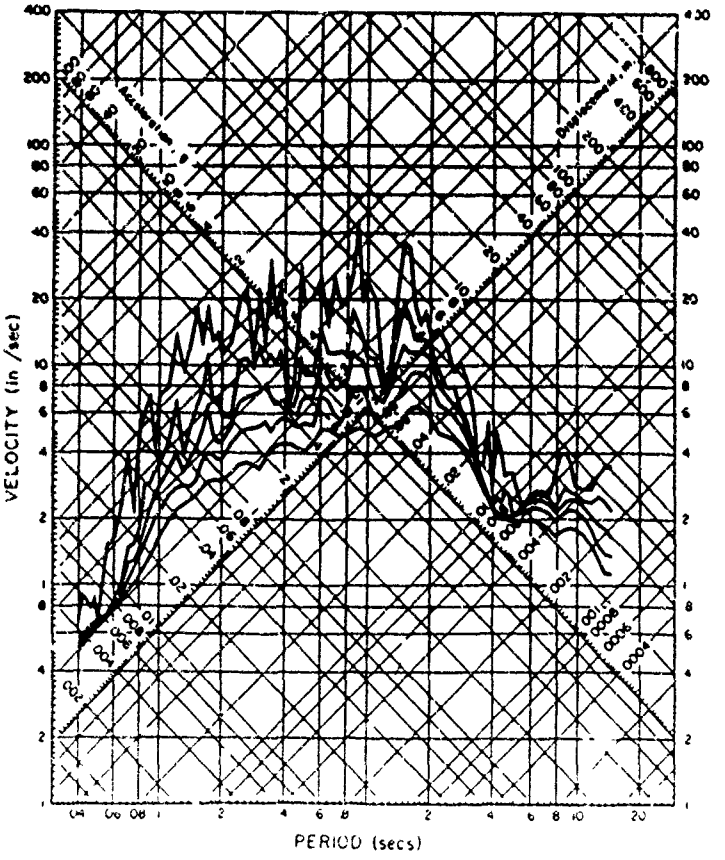
WESTERN WASHINGTON EARTHQUAKE
APR 13, 1949 - 1156 PST

WAS 4

PUGET SOUND, WASHINGTON EARTHQUAKE APR 29, 1965 - 0728 PST



CIT EERL 72-50

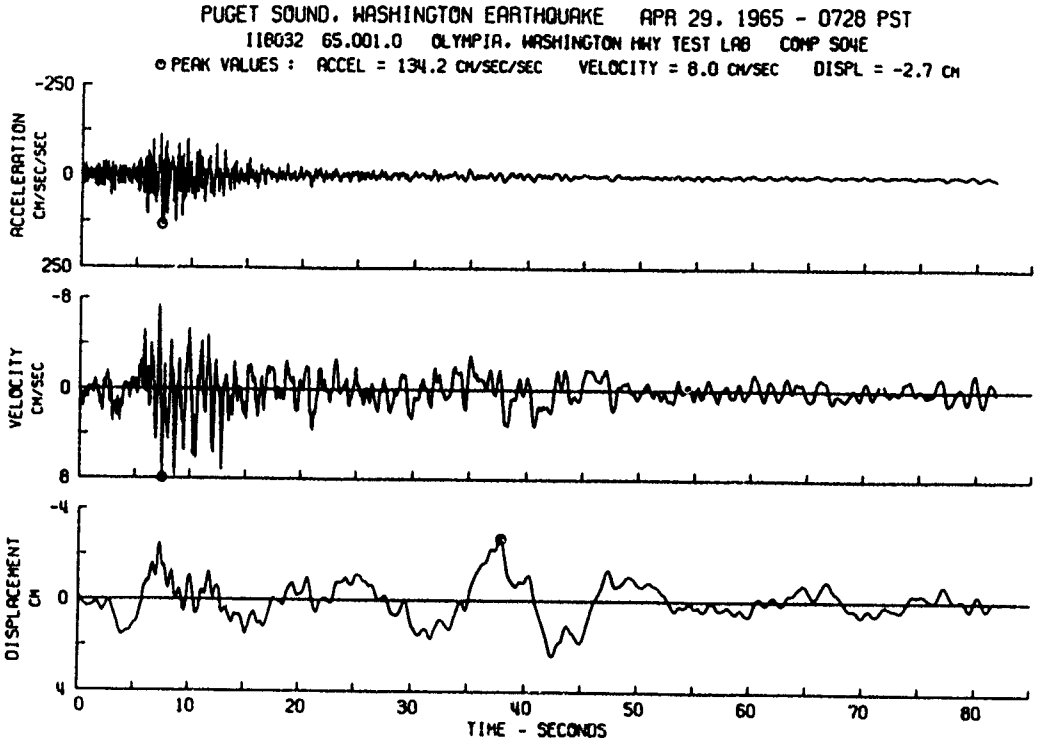


CIT EERL 73-80

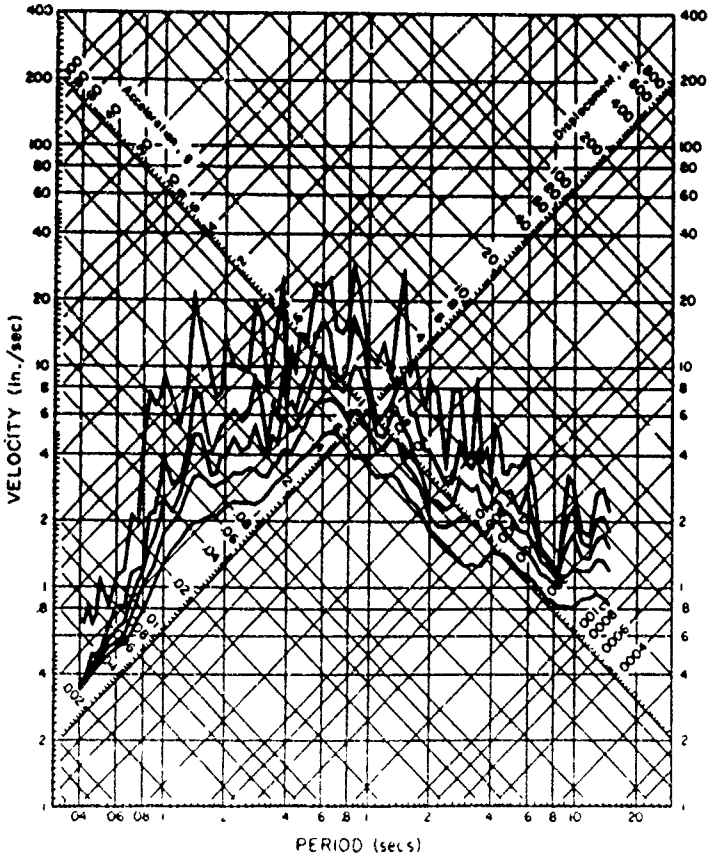
IIIB032 65.001.0 OLYMPIA, WASHINGTON
MAY TEST LAB COMP S86W
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

PUGET SOUND
WASHINGTON EARTHQUAKE
APR 29, 1965 - 0728 PST

WAS 5



CIT EERL 72-50



CIT EERL 73-80

II18032 65.001.0 OLYMPIA, WASHINGTON
HWY TEST LAB COMP SOUE
DAMPING VALUES ARE
0, 2, 5, 10 AND 20 PERCENT OF CRITICAL

PUGET SOUND
WASHINGTON EARTHQUAKE
APR 29, 1965 - 0728 PST

WAS 6

Waterways Experiment Station Cataloging-In-Publication Data

Leeds, David J.

State-of-art for assessing earthquake hazards in the United States. Report 28, Recommended accelerograms for earthquake ground motions / by David J. Leeds ; prepared for Department of the Army, U.S. Army Corps of Engineers ; monitored by Geotechnical Laboratory, US Army Engineer Waterways Experiment Station.

433 p. : ill. ; 28 cm. -- (Miscellaneous paper ; S-73-1 rept. 28)

Includes bibliographic references.

1. Accelerograms. 2. Earthquake intensity. 3. Earthquake hazard analysis -- United States. I. United States. Army. Corps of Engineers. II. U.S. Army Engineer Waterways Experiment Station. III. Title. IV. Title: Recommended accelerograms for earthquake ground motions. V. Series: Miscellaneous paper (U.S. Army Engineer Waterways Experiment Station) ; S-73-1 rept. 28.

TA7 W34m no.S-73-1 rept.28